```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Gaps
                                                                                                                                                                                                                           ö
                                                                                            Query Match
100.0%; Score 18; DB 3; Length 18;
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 18; DB 3; Length 18; Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Synthetic Oligonucleotide US-09-325-193A-51
     ITE: MUCLEIC acid
STRANDEDNESS: aingle
TOPOLOGY: linear
MULECULE TYPE: other nucleic acid
HYPOTHETICAL: no
MATI-SENSE: yes
US-09-078-954-14
                                                                                                                                             1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Artificial Sequence
nucleic acid
                                                                                                                                                                                                        RESULT 14
US-09-325-193A-51
                                                                                                                                              ò
```

APPLICANT: Reced, John
TITLE OF INVENTION: Regulation of BCL-2 Gene Expression
FILE REPERENCE: 10412-052
CURRENT APPLICATION NUMBER: US/09/724,426
CURRENT FILING DATE: 2000-11-28
NUMBER OF SEQ ID NOS: 29
SOFTWARE: Patentin version 3.0
SEQ ID NO 17
LENGTH: 18

; TYPE: DNA ; ORGANISM: Homo sapiens US-09-724-426-17

Sequence 17, Application US/09724426 Patent No. 6414134

RESULT 15 US-09-724-426-17

```
Please mail W/ Action olispole Page 6
                                                                                                                                     ö
                                                                                                                                      Gaps
                                                                                                                                     ô
                                                                                                          Query Match 100.0%; Score 18; DB 3; Length 18; Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                               ઠે
                                                                                                                                                                                   g
```

Search completed: May 4, 2006, 07:23:50 Job time : 39.069 secs

Please Man'w/ Action 6/15/06=ge 1

```
0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:

APPLICANT: Davis, Heather L.

APPLICANT: Schorr, Joachim

APPLICANT: Schorr, Joachim

APPLICANT: Schorr, Joachim

APPLICANT: Krieg, Arthur M.

TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant

TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant

TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant

TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant

TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant

CURRENT APPLICATION NUMBER: US/09/325,193A

PRIOR PILING DATE: 1998-06-03

PRIOR PILING DATE: 1998-09-16

PRIOR PILING DATE: 1998-03-10

PRIOR FILING DATE: 1999-03-10

PRIOR FILING DATE: 1999-03-10

PRIOR FILING DATE: 1999-03-10

NUMBER OF SEQ ID NOS: 98

SOFTWARE: PastSEQ for Windows Version 3.0

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Hatrmann, Gunther
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: for Activating Dendritic Cells
FILE REFERENCE: C1039/7017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1; Matches 20; Conservative 0; Mismatches 0; Indels
        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:

CTHER INFORMATION: Synthetic Oligonucleotide

US-09-325-193A-90
    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/191,170
CURRENT FILING DATE: 1998-11-13
EARLIER APPLICATION NUMBER: US 08/960,774
EARLIER FILING DATE: 1997-10-30
EARLIER FILING DATE: 1997-10-30
EARLIER FILING DATE: 1995-02-07
EARLIER FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 99
SOFTWARE: PASISEQ for Windows Version 3.0
ENGTH: 20
                                                                                                                                                                                                                                                                                                                                                        // Sequence 90, Application US/09325193A
// Patent No. 6406705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 97, Application US/09191170 Patent No. 6429199
                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Artificial Sequence
20; Conservative
Matches
                                                                                                                                                 셤
                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Davie, Heather L.

APPLICANT: Schorr, Joachim
APPLICANT: Schorr, Joachim
APPLICANT: Schorr, Joachim
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
FILE REFERENCE: C1039/7025/HCL
CURRENT APPLICATION NUMBER: US/09/325,193A
FRIOR APPLICATION NUMBER: US/09/325,193A
FRIOR APPLICATION NUMBER: US/09/16
FRIOR APPLICATION NUMBER: BCT/US98/04703
FRIOR APPLICATION NUMBER: PCT/US98/04703
FRIOR APPLICATION NUMBER: DCT/US98/04703
FRIOR APPLICATION NUMBER: US 60/040,376
FRIOR PILING DATE: 1999-03-10
FRIOR FILING DATE: US 60/040,376
FRIOR FILING DATE: US 60/040,
                                                                                                                                                                                              APPLICANT: Bavis, Heather L.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schort, Joachim
APPLICANT: Schort, Joachim
APPLICANT: Wu, Tong
TITLE OF INVENTION: Vectors and Methods for Immunization or
ITLE OF INVENTION: Therapeutic Protocols
FILE REFERENCE: C1039/7009
CURRENT APPLICATION NUMBER: US/09/082,649B
CURRENT APPLICATION NUMBER: US 60/047,233
PRIOR FILING DATE: 1997-05-20
PRIOR PILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 85
SOFTWARE: PASSERQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
OTHER INFORMATION: synthetic oligonuclectide
NAME/KRY: misc_feature
LOCATION: (0)...(0)
OTHER INFORMATION: Backbone is phosphorothioate--phosphodiester
OTHER INFORMATION: chimera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
US-09-325-193A-86
; Sequence 86, Application US/09325193A
; Genen to 6406705
; GENERAL INFORMATION:
                                                                                               Sequence 58, Application US/09082649B
Patent No. 6339068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
```

US-09-082-649B-58

셤

SEQ ID NO 58 LENGTH: 20

FRATURE: OTHER INFORMATION: synthetic oligonucleotide

TYPE: DNA ORGANISM: Artificial Sequence

Score 20; DB 3; Length 20; Pred. No. 1;

100.0%;

Query Match Best Local Similarity

) OTHER INFORMATION: Synthetic Oligonucleotide US-09-325-193A-86

Please Mail W/ Action 115/06/690 1

```
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Blocceleration Ltd.
```

OM nucleic - nucleic search, using sw model

May 4, 2006, 03:52:26 ; Search time 42.2989 Seconds (without alignments) 840.478 Million cell updates/sec Run on:

US-10-789-758A-4 20 Title: Perfect score:

Sequence:

1 ggggtcaacgttgagggggg 20

Scoring table:

IDENTITY NUC Gapop 10.0 , Gapext 1.0

Total number of hits satisfying chosen parameters:

1303057 segs, 888780828 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0*
Maximum Match 100*
Listing first 45 summaries

Database :

Issued Patents NA:*

1: /cgn2_6/ptodata/1/ina/1_COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/1/ina/RB_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/RB_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/RB_COMB.seq:*

7: /cgn2_6/ptodata/1/ina/PP_COMB.seq:*

8: /cgn2_6/ptodata/1/ina/RB_COMB.seq:*

9: /cgn2_6/ptodata/1/ina/RB_COMB.seq:*

9: /cgn2_6/ptodata/1/ina/RB_COMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

				٠																					
•		Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appli	App	156. App	Appli	Appli	Appl	Appl	Appl	Appl	Appl	Appl	Appli	Appli	Appli	Appl
	g	12.	63,	90	52,	59,	47.	12,	52,	59.		135	156			21,	52	12,	46,	61,	68,	N	'n		24,
	Description	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Seguence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence
		2			52	59	7	2	7	6	1	135	156			-	2		46	61	89		ın	w	24
OFFITTERS		-08-738-652-1	US-09-030-701-63	US-08-960-774-90	09-082-649B-5	US-09-082-649B-59	US-09-191-170-47	US-09-337-619-1	US-09-965-101-5	US-09-965-101-5	US-09-672-126B-	US-09-672-126B-	US-09-672-126B-1	US-08-386-063-1	US-08-386-063-1	JS-09-030-701-2	JS-09-286-098-5	US-08-960-774-1	US-09-325-193A-4	US-09-954-987B-61	US-09-672-126B-68	JS-09-786-532-2	JS-09-672-126B-5	US-09-672-126B-6	-09-672-126B-24
E O	ΩI	US-08-	-60-SD	US-08-	-60-SD	US-09-	-60-SD	-60-SD	-60-SD	-60-SD	-60-SD	-60-SD	-60-SD	-80-SD	-80-SD	-60-SD	-60-SD	US-08-	-60-SD	-60-Sn	-60-SD	-60-SD	ns-09-	ns-09-	ns-09-
	8	m	6	ო	ო	ო	m	m	ო	m	m	m	m	m	m	m	m	m	m	m	m	ო	m	m	9
	Length	20	20	50	50	20	50	20	50	20	20	20	21	20	70	19	19	19	19	19	19	20	20	20	20
æ	Ouery Match	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	92.0	92.0	87.0	87.0	87.0	87.0	87.0	87.0	84.0	84.0	84.0	84.0
	Score	20	20	20	20	20	20	50	20	20	20	50	20	18.4	18.4	17.4	17.4	17.4	17.4	17.4	17.4	16.8	16.8	16.8	16.8
	Result No.	H	7	е	4	ហ	φ	7	80	o	10	11	12	13	14	15	16	17	18	19	70	21	. 55	23	24

Sequence 136, App Sequence 151, App Sequence 17, Appl	Sequence 148, App Sequence 15733, A Sequence 41, Appl Sequence 27, Appl	Sequence 78, Appl Sequence 1222, Appl Sequence 921, Appl	921, 27, A			
US-09-672-126B-136 US-09-672-126B-151 US-09-672-126B-17	US-09-672-126B-148 US-09-949-016-15733 US-09-464-535-41 US-09-672-126B-27	US-09-482-273-78 US-10-104-047-1222 US-09-620-312D-921	US-09-620-312D-921 US-08-386-063-27 US-08-386-063-27	US-09-672-126B-165 US-09-270-767-2945 US-09-270-767-18227	US-09-513-999C-15817 US-09-902-540-4875 US-09-470-191-18	US-09-949-016-174326 US-09-949-016-174518
	m m m m			ოოო	m m m	m m
200	21 84587 1426 19	1674 2004 2312	2312 20 20 20	30 379 379	409 504 504	601 601
84.0 84.0	84.0 84.0 79.0 0.0 0.0	79.0	79.0	76.0 76.0 76.0	76.0 76.0 76.0	76.0 76.0
16.8 16.8	16.8 16.8 15.8	15.8 15.8	15.8 15.2 15.2	15.2	15.2	15.2 15.2
22 25 24 25 25 25 25 25 25 25 25 25 25 25 25 25	3 3 2 8	332	35 36 37	8 8 8 8 6 0	4 4 4 3 4 3	44 45
		U	υ	טט	טט	υυ

ALIGNMENTS

```
APPLICANT: Krieg, Arthur M.
APPLICANT: Schwartz, David A.
TITLE OF INVENTION: UNBERFRANTED CHG DINUCLEOTIDE IN THE TREATMENT OF TITLE OF INVENTION: UNBERFRANTED CHG DINUCLEOTIDE IN THE TREATMENT OF TITLE OF INVENTION: LPS-ASSOCIATED DISORDERS
TILE REPERBENCE: C1039/7011
CURRENT APPLICATION NUMBER: 1998-02-25
FRIOR APPLICATION NUMBER: 60/039,405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                     APPLICANT: KILEG, Arthur M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REFERENCE: C1039/7004 HGL
CURRENT APPLICATION NUMBER: US/08/738,652B
CURRENT FILING DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER PILING DATE: 1995-07-07-15
NUMBER OF SEQ ID NOS: 55
SOFTWARE: PASTESQ for Windows Version 3.0
EARLIER FILING LATE: US 08/386,063
EARLIER FILING DATE: 1995-02-07
INUMBER OF SEQ ID NOS: 55
SOFTWARE: PASTESQ for Windows Version 3.0
ELENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:

, OTHER INFORMATION: Synthetic oligonucleotide
US-08-738-652-12
US-08-738-652-12
Sequence 12, Application US/08738652B
Fatent No. 6207646
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 63, Application US/09030701B; Patent No. 6214806; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-030-701-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
```

ö

TYPE: DNA ORGANISM: Artificial Sequence

```
Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                            ; OTHER INFORMATION: synthetic oligonucleotide US-09-030-701-62
              NUMBER OF SEQ ID NOS: 65
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 62
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               是经验
                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 62, Application US/09030701B
Sequence 62, Application US/09030701B
Batent No. 6214806
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Schwartz, David A.
TITLE OF INVENTION: UNB OF NUCLEIC ACIDS CONTAINING
TITLE OF INVENTION: UNBETHYLATED DISORDERS
TITLE OF INVENTION: LPS-ASSOCIATED DISORDERS
FILE REFERENCE: C1039/7011
CURRENT APPLICATION NUMBER: US/09/030,701B
CURRENT FILING DATE: 1999-02-25
PRIOR FILING DATE: 1997-02-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                         OTHER INFORMATION: An oligonucleotide derived from the DNA encoding OTHER INFORMATION: 60 kDa cysteine rich outer membrane protein from US-09-303-862-12
                                                                                                                                                                                                                                                                                                                                                                                                                                           ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
TITLE OF INVENDENCY:
FILE REFERENCE: CIO3977004 HCL.
CURRENT APPLICATION NUMBER: US/08/738,652B
CURRENT PILIG DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER PILING DATE: 1994-07-15
EARLIER PILING DATE: 1995-02-07
NUMBER OF SEQ ID NOS: 55
NUMBER OF SEQ ID NOS: 55
                                                                                                                                                                                                                                                                                                                                                                                Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches '0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Synthetic oligonucieotide
US-08-738-652-10
CURRENT APPLICATION NUMBER: US/09/303,862
CURRENT FILING DATE: 1999-05-03
EARLIER APPLICATION NUMBER: 09/133,774
EARLIER FILING DATE: 1998-08-12
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PATENTIN Ver: 2.0
SERQ ID NO 12
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10, Application US/08738652B, Patent No. 6207646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                             ORGANISM: Chlamydia trachomatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-030-701-62
                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
```

```
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Welner, George
APPLICANT: Welner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Tumune System Using Immunotherapeutic Oligonucleotides and
TITLE OF INVENTION: Cytokines
FILE OF INVENTION: Cytokines
FILE OF INVENTION: Cytokines
FILE REFERENCE: C1039/7026/FIC.
CURRENT APPLICATION NUMBER: US/09/286,098
GURRENT FILING DATE: 1999-04-02
EARLIER APPLICATION NUMBER: US 60/080,729
EARLIER FILING DATE: 1998-04-03
NUMBER OF SEQ ID NOS: 105
SEQ ID NOS: 105
SEQ ID NO 100
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 105, Application US/09286098

Patent No. 6218371

Patent No. 6218371

APPLICANT: NFORMATION:
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Derebods and Products for Stimulating the
TITLE OF INVENTION: Cytokines
TITLE OF INVENTION: 1999-04-02
SARLIER FILING DATE: 1999-04-03
NUMBER OF SEQ ID NOS: 105
COFTWARE FRAESEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Synthetic Sequence US-09-286-098-100
                                                                                                                                                                           Sequence 100, Application US/09286098 Patent No. 6218371
1 rccarcacerrccrcacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
&
```

UMBER: 60/039,405 1997-02-28

NUMBER OF SEQ ID NOS: 65 SOFTWARE: FastSEQ for Windows Version 3.0

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                              OTHER INFORMATION: An oligonuclectide derived from the DNA encoding OTHER INFORMATION: 60 kDa cysteine rich outer membrane protein from OTHER INFORMATION: Chlamydia trachomatis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Krieg, Arthur M.

TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPERENCE: C1039/7004 HCL
CURRENT APPLICATION UNDER: US/08/738,652B
CURRENT PILING DATE: 1996-10-30
EARLIER PILING DATE: 1994-07-15
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER PILING DATE: 1995-02-07
NUMBER OF SEQ ID NOS: 55
SOFTWARE: FABELSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match

100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Synthetic oligonucleotide
US-08-738-652-10
CURRENT APPLICATION NUMBER: US/09/303,862
CURRENT FILING DATE: 1999-05-03
EARLIER APPLICATION NUMBER: 09/133,774
EARLIER FILING DATE: 1998-08-12
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver: 2.0
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-738-652-10
Sequence 10, Application US/08738652B
Facent No. 6207646
GENERAL INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 rccarcacerrccrcacerr 20
                                                                                                                                                                                                            TYPE: DNA ORGANISM: Chlamydia trachomatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORM
US-09-303-862-12
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
Sequence 100, Application US/09286098
Patent No. 618371
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Weiner, George
ITILE OF INVENTION: Methods and Products for Stimulating the
ITILE OF INVENTION: Cytokines
ITILE OF INVENTION: Cytokines
ITILE OF INVENTION: Cytokines
FILE REPRESENCE: 1039/7026/HCL
CURRENT APPLICATION NUMBER: US/09/286,098
CURRENT FILING DATE: 1999-04-02
EARLIER FILING DATE: 1999-04-02
NUMBER OF SEQ ID NOS: 105
SOFTWARE PRESENCE: RestSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 105, Application US/09286098

Patent No. 6218371

GENERAL INFORMATION:
APPLICANT: Writed, Athur M.
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Cytokines
FIRE REPRESENCE: C1039/7026/HGL
CURRENT APPLICATION NUMBER: US/09/286,098
CURRENT FILING DATE: 1999-04-02
EARLIER APPLICATION NUMBER: US 60/080,729
EARLIER FILING DATE: 1999-04-03
NUMBER OF SEQ ID NOS: 105

SOUTWARE FREEDED for Windows Version 3.0
                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                            Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                          DB 3; Length 20
                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                   ; OTHER INFORMATION: synthetic oligonucleotide US-09-030-701-62
                                                                                                                                                                                                                     Query Match
100.0%; Score 20; DE
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) OTHER INFORMATION: Synthetic Sequence US-09-286-098-100
                                                                                                                                                                                                                                                                                                                                       TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-286-098-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-09-286-098-105
SOFTWARE: Fa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 105
LENGTH: 20
                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ਨੇ
```

DINUCLEOTIDE IN THE TREATMENT OF

APPLICANT: Krieg, Arthur M.
APPLICANT: Schwartz, David A.
TITLE OF INVENTION: USE OF NUCLEIC ACIDS CONTAINING
TITLE OF INVENTION: UNMETHYLATED CAG DINUCLEOTIDE IN
TITLE OF INVENTION: LES-ASSOCIATED DISORDERS
FILE REFERENCE: C1039/7011
CURRENT APPLICATION NUMBER: US/09/030,701B
CURRENT FILING DATE: 1998-02-25
PRIOR APPLICATION NUMBER: 60/039,405,
PRIOR FILING DATE: 1997-02-28

Sequence 62, Application US/09030701B Patent No. 6214806 GENERAL INFORMATION:

-09-030-701-62

114 Page Blank (uspło)

ö

Gaps

ö

0; Indels

0; Mismatches

20; Conservative

Matches

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Davis, Heather L.
APPLICANT: Schorr, Joachim
APPLICANT: Schorr, Joachim
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
FILE REPERENCE: C1039/7025/HCL
CURRENT APPLICATION NUMBER: US 09/154,614
PRIOR APPLICATION NUMBER: US 09/154,614
PRIOR APPLICATION NUMBER: PCT/US98/04703
PRIOR PILING DATE: 1998-09-16
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1997-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; IOCATION: (0) ... (0)
; OTHER INFORMATION: Backbone is phosphorothioate--phosphodiester
; OTHER INFORMATION: chimera
US-09-082-6498-58
                                                                                          APPLICANT: Davis, Heather L.
APPLICANT: Schorr, Joachim
APPLICANT: Schorr, Joachim
APPLICANT: Schorr, Joachim
APPLICANT: Wu, Tong
TITLE OF INVENTION: Vectors and Methods for Immunization or
TITLE OF INVENTION: Therapeutic Protocols
FILE REFERENCE: C1099/7009
CURRENT APPLICATION NUMBER: US/09/082,649B
CURRENT FILING DATE: 1999-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR PILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 85
SOFTWARE: PastSEQ for Windows Version 3.0
IENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRATURE:
OTHER INFORMATION: synthetic oligonucleotide
NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-325-193A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 86, Application US/09325193A - Patent No. 6406705
GENERAL INFORMATION:
Sequence 58, Application US/09082649B Patent No. 6339068
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
```

```
APPLICANT: Davis, Heather L.
APPLICANT: Davis, Heather L.
APPLICANT: Schorr, Joachim
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Use of Nucleic Acids Containing
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
FILE REFERENCE: C1039/7025/HGL
CURRENT APPLICATION NUMBER: US/09/325,193A
CURRENT PILING DATE: 1999-06-03
PRIOR APPLICATION NUMBER: US 09/154,614
PRIOR APPLICATION NUMBER: PCT/US98/04703
PRIOR APPLICATION NUMBER: PCT/US98/04703
PRIOR APPLICATION NUMBER: US 60/040,376
PRIOR FILING DATE: 1998-03-10
NUMBER OF SEQ ID NOS: 98
SEQ ID NO 90
IENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GRENEAL INFORMATION:
APPLICANT: Kiteg, Arthur M.
APPLICANT: Hartmann, Gunther
TITLE OF INVENTION: Immunoetimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunoetimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunoetimulatory Nucleic Cells
TITLE OF INVENTION: INFORMATION:
CURRENT APPLICATION NUMBER: US 08/960,774
EARLIER APPLICATION NUMBER: US 08/960,774
EARLIER PILING DATE: 1996-110-30
EARLIER PILING DATE: 1996-10-30
EARLIER PILING DATE: 1996-10-30
EARLIER PILING DATE: 1996-10-30
EARLIER PILING DATE: 1996-0-07
EARLIER PILING DATE: 1996-0-07
EARLIER PILING DATE: 1996-0-07
EARLIER FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 99
SOFTWARE: FABSER FILING DATE: 1994-07-15
ILENGHARE: PABSER FILING DATE: 1994-07-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 20; DB 3;
100.0%; Pred. No. 1;
tive 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-325-193A-90
Sequence 90, Application US/09325193A Patent No. 6406705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 97, Application US/09191170
Patent No. 6429199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                        GENERAL INFORMATION:
APPLICANT: Davis, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
```

Chan, Christina

Minnifield, Mita; STIC-Biotech/ChemLib Wednesday, May 03, 2006 9:14 AM

RE: sedneuce search request

:oT :tuaS From:

Subject:

Please rush. Thanks Chris

TC 1600 New Hire Training Coordinator and SPE 1644 Chris Chan

1480-272-(172)

Remsen, 3E89

-----9tessaM leniginO-----

Minnifield, Nita From:

Chan, Christina Tuesday, May 02, 2006 11:53 AM :quəs

sedneuce search request Subject:

please approve, 2 month amdt. due. Christina,

SLIC

8\$L68L/0I

the above application. Please do a commercial and interference sequence search on SEQ ID NO: 1-7 of

Please provide a paper copy of all results.

Art Unit 1645 94614 Minnifield Thanks,

Ofher (Specify):
WWW/Internet:
SEQUENCE SYSTEM:
rexis/nexis:
QUESTEL/ORBIT:
DIALOG:
:NTS
Vendors and cost where applicable

—:подевділ	tor:	Inven
Text:	:# əɹn	Struct
	:lens1T\əb	Euco
omer:	eilO	⁻:٦/S
:#VV		#AN
Search	Type of	

	Online Time:
	Searcher Prep Time:_
	Date completed:
:dn	Date Searcher Picked
	Searcher Phone:
	Searcher:

```
RESULT 2
US-10-619-279-10
US-10-619-279-10
; Sequence 10, Application US/10619279
; Publication No. US20050267057A1
; GENERAL INFORMATION:
                                                                                           ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18.4
18.4
18.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 7, Apr. Sequence 7, Apr. Sequence 63, Appl Sequence 130, Appl Sequence 1130, Appl Sequence 145, Appl 146, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43, Appl
10, Appl
10, Appl
3, Appli
7, Appli
63, Appli
82, Appl
                                                                                                                                                                                  4, 2006, 08:17:52; Search time 456.437 Seconds (without alignments) 178.449 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10, 1
Sequence 3, An
Sequence 43, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10,
Sequence 10,
Sequence 3, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Published Applications NA New:*

1: $IDS5/ptodata/2/pubpna/US08 NEW PUB.seq1:*

2: $IDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*

3: $IDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*

3: $IDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*

5: $IDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*

6: $IDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*

7: $IDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*

8: $IDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*

9: $IDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*

11: $IDS5/ptodata/2/pubpna/US10 NEW PUB.seq:*

11: $IDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*

12: $IDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*

13: $IDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*

14: $IDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*

15: $IDS5/ptodata/2/pubpna/US11 NEW PUB.seq2:*

16: $IDS5/ptodata/2/pubpna/US11 NEW PUB.seq2:*

17: $IDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

18: $IDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

18: $IDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

18: $IDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

19: $IDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

10: $IDS5/ptodata/2/pubpna/US10 NEW PUB.seq3:*
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-469-561-5
US-10-619-279-10
US-10-435-656-10
US-10-833-634-43
US-10-333-634-43
US-11-296-572-10
US-11-226-572-10
US-11-127-654-63
US-11-127-654-63
US-11-127-654-130
US-11-127-654-145
US-11-127-654-145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9306428 segs, 2036268586 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                         nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                      1 tccatgacgttcctgacgtt 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                   IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                         US-10-789-758A-1
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
                                                                                                                                                                                         May
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                        Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB Maximum DB
                                                                                                                         OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database
                                                                                                                                                                                         е
Е
                                                                                                                                                                                         Run
```

```
19, Appl
61, Appl
11, Appl
11, Appl
22, Appl
221, Appl
47485, A
37, Appl
37, Appl
                                Sequence
Sequence
Sequence
Sequence
                                             Sequence
Sequence
Sequence
                                                       Sequence
Sequence
Sequence
                                                                              Sequence
Sequence
             Sequence
Sequence
                   Sequence
Sequence
                                                                       Sequence
                                                                                    Sequence
                                                                                           Sequence
                                                                 Sequence
                                                                    Sequence
                                                                                              Sequence
       Sequence
          Sequence
                          Sequence
                             Sequence
                                                                                                 Sequence
```

ö , OTHER INFORMATION: synthetic immunostimulatory oligonucleotide US-10-469-561-5 20; Length ö Query Match 100.0%; Score 20; DB 10; Best Local Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Sequence 5, Application US/10469561
Sequence 5, Application US/10469561
Publication No. US20050260216A1
GENERAL INFORMATION:
APPLICANT: Claire Ashman
APPLICANT: James Scott Crowe
APPLICANT: James Scott Crowe
APPLICANT: Alan Peter Lewis
TITLE OF INVENTION: VACCINE
FILE REPERENCE: PG4355USW
CURRENT APPLICATION NUMBER: US/10/469,561
CURRENT PILING DATE: 2003-08-29
NUMBER OF SEQ ID NOS: 25
SEQ ID NO 5
ERGYTHARE: FASTEED for Windows Version 4.0
SEQ ID NO 5
ERGYTH: 20 1 TCCATGACGTTCCTGACGTT 20

TCCATGACGTTCCTGACGTT

ö

Gaps

```
US-10-881-661-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: KITHE, JOEI N.
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Klinman, Dennis
APPLICANT: Klinman, Dennis
APPLICANT: Klinman, Dennis
APPLICANT: Steinberg, Alfred D.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPREBRUE: C1039/7048 (AWS)
CURRENT APPLICATION NUMBER: US 010/435,656
CURRENT FILING DATE: 1994-09
PRIOR APPLICATION NUMBER: US 08/276,358
PRIOR APPLICATION NUMBER: US 08/276,358
PRIOR APPLICATION NUMBER: US 08/738,652
PRIOR FILING DATE: 1995-02-07
PRIOR FILING DATE: 1995-02-07
PRIOR FILING DATE: 1995-10-30
NUMBER OF SEQ 1D NOS: 56
SOFFWARE: FastSEQ for Windows Version 3.0
APPLICANT: Krieg, Arthur M.

TILE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPERENCE: C1039/7023/HCL.
CURRENT APPLICATION WUMBER: US/10/619,279
CURRENT FILING DATE: 2003-07-14
PRIOR FILING DATE: 1008/703-07-14
PRIOR FILING DATE: 1995-10-30
FRIOR FILING DATE: 1995-10-30
PRIOR FILING DATE: 1995-02-07
PRIOR APPLICATION NUMBER: US 08/386,063
PRIOR FILING DATE: 1995-02-07
PRIOR FILING DATE: 1995-02-07
PRIOR FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PREUSEO for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
100.0%; Score 20; DB 10; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.17;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 20; DB 10;
Pred. No. 0.17;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) OTHER INFORMATION: Synthetic oligonucleotide
US-10-435-656-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEATURE:
// OTHER INFORMATION: Synthetic Oligonucleotide
US-10-619-279-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10, Application US/10435656
Publication No. US20050277604A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 rccardacerrccreacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
US-10-881-661-3
; Sequence 3, Application US/10881661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match

Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

```
JOHNSTON THE UNITED STATES OF AMERICA AS REPRESENTED BY THE APPLICANT: THE UNITED STATES OF AMERICA AS REPRESENTED BY THE APPLICANT: SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES APPLICANT: Idinama, Dennis M.

APPLICANT: Ivins, Bruce

APPLICANT: Verthelyi, Daniela

TITLE OF INVENTION: METHOD OF PREVENTING INFECTIONS FROM BIOTERRORISM AGENTS WITH TITLE OF INVENTION: 1MAUNOSTIMULATORY CpG OLIGONUCLEOTIDES

FILE REFERENCE: 4239-67021-06

CURRENT APPLICATION NUMBER: DCT/US2003/034523

FRIOR APPLICATION NUMBER: PCT/US2003/034523

PRIOR FILING DATE: 2003-10-31

PRIOR FILING DATE: 2003-11-01

NUMBER OF SEQ ID NOS: 199

SOFTWARE: PACENTIN VERSION 3.2

SEQ ID NO 43

LENGTH: 20

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                        APPLICANT: Pease, Larry R.
APPLICANT: Ijima, Koji
APPLICANT: Kita, Hirohito
APPLICANT: Kita, Hirohito
APPLICANT: Kita, Hirohito
FILE REFERENCE: 07039-520001
CURRENT APPLICATION NUMBER: US/10/881,661
CURRENT FILING DATE: 2004-06-30
NUMBER OF SEQ ID NOS: 5
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 20; DB 11; Length 20; 100.0%; Pred. No. 0.17; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
100.0%; Score 20; DB 10;
Best Local Similarity 100.0%; Pred. No. 0.17;
Matches 20; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: K oligonucleotide US-10-533-634-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
US-10-382-822-10
Sequence 10, Application US/10382822
Publication No. US20060058251A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Sequence 43, Application US/10533634
; Publication No. US20060019239A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE: OTHER INFORMATION: Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 rccardacgrrccrdacgrr 20
                       GENERAL INFORMATION:
APPLICANT: Radhakrishnan, Suresh
APPLICANT: Pease, Larry R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: Artificial Sequence
US20060002928A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Krieg, Arthur M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
US-10-533-634-43
```

```
1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-11-025-858-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-11-296-572-10

Sequence 10, Application US/11296572

Publication No. US20060089326A1

Sequence 10, Application US/11296572

Publication No. US20060089326A1

SEQUENCE INFORMATION:

APPLICANT: Kiine, Joel N.

TITLE OF INVERTION: Alfred D.

TITLE OF INVERTION NUMBER: US/09/818,918

FRIOR PILING DATE: 2001-03-27

FRIOR PILING DATE: 2001-03-27

FRIOR PILING DATE: 1994-07-15

FRIOR FILING DATE: 1994-07-15

FRIOR FILING DATE: 1996-10-30

FRIOR FILING DATE: 1996-10-30

FRIOR FILING DATE: 1996-10-30

FRIOR FILING DATE: 1996-10-30

NUMBER OF SEQ ID NOS: 56

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 10

LENGTH A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
100.0%; Score 20; DB 14; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.17;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.0%; Score 20; DB 12; Length 20; Best Local Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Indels
               APPLICANT: Stainbarg, Alired D.

TITLE OF INVENTION: Methods for Treating and Preventing;
TITLE OF INVENTION: Infectious Disease
TITLE OF INVENTION: Infectious Disease
TITLE OF INVENTION: Infectious Disease
CURRENT APPLICATION NUMBER: US/10/382,822
CURRENT FILING DATE: 2003-03-06
PRIOR PRIOR PELION NUMBER: US 08/530,319
PRIOR FILING DATE: 1997-10-30
PRIOR FILING DATE: 1997-10-30
PRIOR FILING DATE: 1997-10-30
PRIOR FILING DATE: 1996-10-30
PRIOR PRIOR FILING DATE: 1996-10-30
PRIOR PLICATION NUMBER: US 08/738,652
PRIOR FILING DATE: 1996-0-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic oligonucleotide US-11-296-572-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Synthetic Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
Klinman, Dennis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-382-822-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                    APPLICANT: Hoerr, Ingmar
APPLICANT: Von Der Mulbe, Florian
APPLICANT: Von Der Mulbe, Florian
APPLICANT: Pascolo, Steve
TITLE OF INVENTION: Immunstimulation by chemically modified RNA
TITLE OF INVENTION: Immunstimulation by chemically modified RNA
FILE REFERENCE: Curevac GmbH (2793-1-002)
CURRENT FILING DATE: 2004-12-28
CURRENT FILING DATE: 2004-12-28
PRIOR FILING DATE: 2003-07-03
PRIOR FILING DATE: 2003-07-03
PRIOR FILING DATE: 2002-07-03
NUMBER OF SEQ ID NOS: 88
SOFTWARE: PatentIn version 3.3
SOFTWARE: PatentIn version 3.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Hoerr, Ingmar
APPLICANT: Won Der Mulbe, Florian
APPLICANT: Von Der Mulbe, Florian
APPLICANT: Pascolo, Steve
TITLE OF INVENTION: Immunstimulation by chemically modified RNA
FILE REFERENCE: Curevac GmbH (2793-1-002)
CURRENT APPLICATION NUMBER: US/11/025,858
CURRENT FILING DATE: 2004-12-28
PRIOR FILING DATE: 2003-07-03
PRIOR FILING DATE: 2003-07-03
NUMBER OF SEQ ID NOS: 8
SOFTWARE: PatentIn version 3.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: synthetic oligonucleotide, CpG RNA 1826
US-11-025-858-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: synthetic oligonucleotide, CpG DNA 1826
US-11-025-858-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 20; DB 17;
100.0%; Pred. No. 0.17;
Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   / Match 100.0%; Score 20; DB 17; Local Similarity 65.0%; Pred. No. 0.17; nes 13; Conservative 7; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 7, Application US/11025858 Publication No. US20050250723A1 GENERAL INFORMATION:
Sequence 3, Application US/11025858; Publication No. US20050250723A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: RNA
ORGANISM: Artificial Sequence
```

```
Sequence 130, Application US/11127654
; Bequence 130, Application US/11127654
; Publication No. 1020
; BenERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Berg, Daniel J.
; TITLE OF INVENTION: INFLAMMATORY DISEASES
; TITLE OF INVENTION: INFLAMMATORY DISEASES
; FILE REFERENCE: C1039,70060US01
; CURRENT APPLICATION NUMBER: US/11/127,654
; CURRENT FILING DATE: 2005-05-12
; PRIOR APPLICATION NUMBER: US 10/112,653
; PRIOR PILING DATE: 2001-03-29
; PRIOR PILING DATE: 2001-03-29
; NUMBER: OF SEQ ID NOS: 1040
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 130
; LENGTH: 20
; LENGTH: 20
; LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 145, Application US/11127654
| Publication No. US20050250726A1
| GENERAL INFORMATION:
| APPLICANT: Krieg, Arthur M. |
| APPLICANT: Krieg, Daniel J. |
| TITLE OF INVENTION: INFLAMMATORY DISEASES |
| FILE REFERENCE: CLO39.70060US01 |
| CURRENT APPLICATION NUMBER: US/11/127,654 |
| CURRENT PILING DATE: 2005-05-12 |
| PRIOR PILING DATE: 2002-03-29 |
| PRIOR FILING DATE: 2001-03-29 |
| NUMBER: OF SEQ ID NOS: 1040 |
| SOFTWARE: Patentin version 3.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 20; DB 17;
100.0%; Pred. No. 0.17;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 20; DB 17; 100.0%; Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 rccargacgrrccrgacgrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 rccardacdrrccrdacgrr 20
                                                              1 rccardacdrrccrdacdrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.0
....hag 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                RESULT 12
US-11-127-654-130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
US-11-127-654-145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 145
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                         ठ
                                                           셤
RESULT 10
US-11-127-654-63

Sequence 63, Application US/11127654

Publication No. US20050250726A1

GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

TITLE OF INVENTION: IMMUNOSITEMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC

TITLE OF INVENTION: INFLAMMATORY DISEASES

FILE REFERENCE: C1039.70060US01

CURRENT APPLICATION NUMBER: US/11/127,654

CURRENT FILING DATE: 2005-05-05

PRIOR APPLICATION NUMBER: US 60/279,642

PRIOR APPLICATION NUMBER: US 60/279,642

PRIOR PILING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFTWARE: Patentin version 3.2

SEQ ID NO 63

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11

US-11-127-654-82

US-11-127-654-82

Sequence 82, Application US/11127654

Publication No. US20050250726A1

GENERAL INPORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Merg, Daniel J.
TITLE OF INVENTION: INFLAMMATORY DISEASES

FILE REFERENCE: C1039-70060US01

CURRENT APPLICATION NUMBER: US/11/127,654

CURRENT FILING DATE: 2005-05-12

PRIOR PILING DATE: 2002-03-29

PRIOR PELING DATE: 2001-03-29

PRIOR PELING DATE: 2001-03-29

PRIOR PELING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFTWARE PATENTIN VERSION 3.2

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 20; DB 17; Length 20; Best Local Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; Score 20; DB 17; Length 20; Pred. No. 0.17; 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: modified base;
COCATION: (17)...(17)
COTHER INFORMATION: m5c
US-11-127-654-82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: modified base
LOCATION: (8)..(8)
OTHER INFORMATION: m5c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
```

ö

ò

```
Job time : 456.437 secs
```

```
US-11-127-654-292
US-11-127-654-292
Sequence 292, Application US/11127654
FUBLication No. US20050250726A1
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC
TITLE OF INVENTION: IMMUNOSTIMULATORY DISEASES
FILE REPERENCE: C1039.70660US01
CURRENT PELING DATE: 2005-05-12
FRIOR FILING DATE: 2005-05-12
FRIOR FILING DATE: 2001-03-29
FRIOR APPLICATION NUMBER: US 60/279,642
FRIOR FILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SOFTWARE: PARCENT PROFILE PARCENT OF SEQ ID NOS: 1040
SOFTWARE: PARCENT OF SEQ ID NOS: 1040
RESULT 14

US-11-127-654-146

Sequence 146, Application US/11127654

Publication No. US20050250726A1

GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Rerieg, Daniel J.
TITLE OF INVENTION: INFLAMMATORY DISEASES
FILE REFERENCE: C1039-70060US01

CURRENT APPLICATION NUMBER: US/11/127,654

CURRENT FILING DATE: 2005-03-29

PRIOR FILING DATE: 2002-03-29

PRIOR PILING DATE: 2002-03-29

PRIOR PILING DATE: 2001-03-29

PRIOR PILING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFTWARE PATENTIN VERSION 3.2

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 20; DB 17; Length 20; Best Local Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%; Score 20; DB 17; Length 20; Best Bocal Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
US-11-127-654-146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Synthetic oligonucleotide US-11<sup>2</sup>127-654-292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 rccarcaccirccrcaccir 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
```

Search completed: May 4, 2006, 10:07:24

Sequence Sequence Sequence

App App 33, App 955, App 955, App 6956, App ance 958, App ance 1023, App ance 83, App ance 83, App ance 69, App Sequence 69, App Sequence 152, App ance 152, App ance 153, App

Sequence

OM nucleic

Run on:

Sequence:

Minimum DB Maximum DB

Database :

```
PAPLICANT: Kenall, charlotte
TITLE OF INVENTION: Innate Immunity-Stimulating Compositions of CpG and
TITLE OF INVENTION: Saponin and Methods Thereof
CURRENT APPLICATION NUMBER: US/09/760,506
CURRENT APPLICATION NUMBER: G0/100,853
PRIOR PILING DATE: 2000-05-01
PRIOR PLING DATE: 2000-01-13
PRIOR PLING DATE: 2000-01-13
PRIOR PLING DATE: 1999-04-08
PRIOR PLING DATE: 1998-08-10
NUMBER: G0/055,913
PRIOR FILING DATE: 1998-08-10
NUMBER: PATENTING DATE: 1998-08-10
SOFTWARE: PATENTING DATE: 1998-08-10
SOFTWARE: PATENTING DATE: 1998-08-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence: Motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 5.6; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
US-09-768-012-3
US-09-768-012-3
; Sequence 3, Application US/09768012
; Patent No. US2001004416A1
; GENERAL INFORMATION:
GAPLICANT: Davis, Heather L.
; APPLICANT: McCluskie, Michael J.
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids for
US-09-776-479-302
US-09-776-479-948
US-09-776-479-949
US-09-776-479-950
US-09-776-479-951
US-09-776-479-953
US-09-776-479-955
US-09-776-479-955
US-09-776-479-955
US-09-776-479-955
US-09-776-479-958
US-09-776-479-958
US-09-776-479-1023
US-09-776-479-1023
US-09-776-479-137
US-09-984-365-42
US-09-984-365-42
US-09-776-479-153
US-09-776-479-153
US-09-776-479-153
US-09-776-479-153
US-09-776-479-153
US-09-776-479-153
                                                                                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/09760506
Publication No. US20010034330A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 20; Conservative
    Query Match
Best Local Similarity
    US-09-760-506-3
                                                                                                                                                                                                                                                                                                                                                                                              US-09-760-506-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 100, App
Sequence 105, App
Sequence 1, Appli
Sequence 1, Appli
Sequence 86, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seguence 3, Appli
Seguence 3, Appli
                                                                                              May 4, 2006, 07:24:16; Search time 298.851 Seconds (without alignments) 553.412 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence Sequence S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                   '(cgn2_6/ptodata/1/pubpna/USO7_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USO8B_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USO8B_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USIOR_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USIOR_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USIOR_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USIOR_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USIOR_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USIOR_PUBCOMB.seq:*
'(cgn2_6/ptodata/1/pubpna/USIOR_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                 19587084
                 5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-760-506-3
US-09-768-012-3
US-09-824-468-100
US-09-949-194-1
US-09-917-222-1
US-09-800-266A-90
US-09-805-007A-96
US-09-805-007A-96
US-09-925-007A-96
US-09-926-313-86
US-09-926-313-86
US-09-988-326-561
US-09-888-326-561
US-09-888-326-563
US-09-888-326-563
US-09-888-326-563
US-09-888-326-563
US-09-888-326-563
US-09-888-326-563
US-09-888-326-563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-776-479-69
US-09-776-479-137
US-09-776-479-152
US-09-776-479-153
US-09-776-479-223
                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                           Published_Applications_NA_Main:*
                                                                                                                                                                                                                                                    9793542 segs, 4134689005 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                 GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                     nucleic search, using sw model
                                                                                                                                                                                  1 tecatgaegtteetgaegtt 20
                                                                                                                                                                                                           IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                           length: 0
length: 2000000000
                                                                                                                                                 US-10-789-758A-1
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                             Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bed
Bed
                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perfect score:
```

ö

Gaps

;

2221098765432 2221098765432

Result

```
TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and TITLE OF INVENTION: Cytokines FILE REPERENCE: CIO39/7026/HGL CURRENT APPLICATION NUMBER: US/09/824,468 CURRENT FILING DATE: 2001-04-02 PRICA APPLICATION NUMBER: 09/286,098 PRICA REPLICATION NUMBER: 09/286,098 PRICA FILING DATE: 1999-04-02 NUMBER OF SEQ ID NOS: 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Granoff, Dan
APPLICANT: Granoff, Dan
APPLICANT: Moe, Gregory R.
TITLE OF INVENTION: VACCINES FOR BROAD SPECTRUM PROTECTION
TITLE OF INVENTION: VACINED BY NEISSERIA MENINGITIDIS
FILE REPERENCE: CHOROO1
CURRENT APPLICATION NUMBER: US/09/917,222
CURRENT FILING DATE: 2001-07-27
PRIOR APPLICATION NUMBER: US 60/221,495
PRIOR FILING DATE: 2000-07-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/09949194

Sequence 1, Application US/09949194

Patent No. US20020091097A1

GENERAL INFORMATION:

APPLICANT: Bratzler, Robert L.

APPLICANT: Betersen, Deanna M.

TITLE OF INVENTION: Treatment of Sexually Transmitted Diseases

TITLE OF INVENTION: Treatment of Sexually Transmitted Diseases

FILE REPERENCE: C1037/7011 (HCL/MAT)

CURRENT APPLICATION NUMBER: US/09/949,194

CURRENT FILING DATE: 2001-09-07

PRIOR FILING DATE: 2000-09-07

NUMBER OF SEQ ID NOS: 1

SEQ ID NO 1

LENGTH: 20

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 5.6; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ) OTHER INFORMATION: Synthetic Sequence US-09-949-194-1
                                                                                                                                                                                                                                                                                                                                                                              ) OTHER INFORMATION: Synthetic Sequence US-09-824-468-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/09917222; Patent No. US20020110569A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 rccardacerrccreacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 rccardaccriccrdaccrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 100. Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
US-09-949-194-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-917-222-1
                                                                                                                                                                                                                                                SEQ ID NO 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. US2002064515A1

Patent No. US2002064515A1

GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

APPLICANT: Wainer, George

TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Methods and Products for Stimulating the
CURRENT FILING DATE: 2001-04-02

PRIOR PAPLICATION NUMBER: 09/286,098

PRIOR PILING DATE: 1999-04-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 105, Application US/09824468
Patent No. US20020064515A1
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20; DB 3; Length 20;
Pred. No. 5.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
             TITLE OF INVENTION: Inducing a Th2 Immune Response CURRENT PAPLICATION NUMBER: US/09/768,012
CURRENT FILING DATE: 2001-01-22
PRIOR PLICATION NUMBER: US 60/17,461
PRIOR FILING DATE: 2000-01-20
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FRAELEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                FEATURE:
OTHER INFORMATION: Synthetic Sequence
OTHER INFORMATION: Synthetic Sequence
LOCATION: (8)...(8)
OTHER INFORMATION: Cytosine is unmethylated.
NAME/KEY: modified base
LOCATION: (17)...(17)
OTHER INFORMATION: Cytosine is unmethylated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 105
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , OTHER INFORMATION: Synthetic Sequence US-09-824-468-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-824-468-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 100
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-768-012-3
                                                                                                                                                                                                                             SEQ ID NO 3
LENGTH: 20
                                                                                                                                                                                                                                                                                       TYPE: DNA
```

ð

ઠે

```
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-895-007A-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 86
LENGTH: 20
                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 8

US-09-800-266A-90

Sequence 90, Application US/09800266A

Patent No. US20020156033A1

GENERAL INFORMATION:

APPLICANT: Bratzler. Robert L.

APPLICANT: Bratzler. Robert L.

TITLE OF INVENTION: Immunostimulatory Nucleic Acids and

TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of

TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of

TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of

TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of

TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of

TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of

TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of

FILE REFERENCE: 2003/09/800,266A

CURRENT APPLICATION NUMBER: US/09/800,266A

CURRENT APPLICATION NUMBER: US 60/187,214

FRIOR FILING DATE: 2000-03-03

NUMBER OF SEQ ID NOS: 146

SOFTWARKE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 86, Application US/09800266A
Patent No. US20020156033A1
GENERAL INFORMATION:
APPLICANT: Bratzler, Robert L.
APPLICANT: Petersen, Deanna M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acids and
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
CURRENT APPLICATION NUMBER: US/09/800,266A
CURRENT PILING DATE: 2001-03-05
PRIOR FILING DATE: 2000-03-03
                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 5.6; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                              DB 3; Length 20;
                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                           Query Match
100.0%; Score 20; DE
Best Local Similarity 100.0%; Pred. No. 5.6
Matches 20; Conservative 0; Mismatches
NUMBER OF SEQ ID NOS: 1
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 146
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 86
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Synthetic Sequence US-09-800-266A-86
                                                                                                                                                                                        ; OTHER INFORMATION: CpG nucleotides US-09-917-222-1
                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                          1 rccarcaccirccrcaccir 20
                                                                                                            TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-800-266A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 90
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

```
ö
                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INCORNATION:

APPLICANT: Schetter, Christian
APPLICANT: Schetter, Robert L.
APPLICANT: Bratzler, Robert L.
APPLICANT: Petersen, Deanna M.
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACIDS FOR THE
TITLE OF INVENTION: TREATMENT OF ANEMIA, THROMBOCYTOPENIA, AND NEUTROPENIA
FILE REFERENCE: C1041/7014 (AMS)
CURRENT APPLICATION NUMBER: US/09/895,007A
CURRENT FILING DATE: 2001-06-28
PRIOR PILING DATE: 2000-06-28
NUMBER OF SEQ ID NOS: 133
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 90, Application US/09895007A

Batent No. US20020165178A1

GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Schetter, Christian
APPLICANT: Schetter, Robert L.
APPLICANT: Peteren, Deanna M.
TITLE OF INVENTION: TREATMENT OF ANEMIA, THROMBOCYTOPENIA, AND NEUTROPENIA
FILE REFERENCE: C1041/7014 (AWS)
CURRENT APPLICATION NUMBER: US/09/895,007A
CURRENT APPLICATION NUMBER: US 60/214,368
PRIOR APPLICATION NUMBER: US 60/214,368
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                    Ouery Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
100.0%; Score 20; DB 3;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Synthetic oligonucleotide US-09-895-007A-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: Synthetic oligonucleotide US-09-895-007A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 133
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 90
LENGTH: 20
; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-800-266A-90
                                                                                                                                                                                                                                                                                                                                                                                  US-09-895-007A-86
; Sequence 86, Application US/09895007A
; Patent No. US20020165178A1
                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                 1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 rccargacerrccrgacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                       Sequence 560, Application US/09888326
| Sequence 560, Application US/09888326
| Publication No. US20030026801A1
| GENERAL INFORMATION:
| APPLICANT: Weiner, George
| APPLICANT: Weiner, George
| TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
| TITLE OF INVENTION: Cell Lygis and Treating Cancer
| TITLE OF INVENTION: Cell Lygis and Treating Cancer
| FILE REFERENCE: Clo39/7052 (AWS)
| CURRENT APPLICATION NUMBER: US/09/888,326
| CURRENT FILING DATE: 2001-06-22
| PRIOR FILING DATE: 2000-06-22
| NUMBER OF SEQ ID NOS: 848
| SOFTWARE: FastSEQ for Windows Version 3.0
| LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 561, Application US/0988326
| Publication No. US20030026801A1
| Publication No. US20030026801A1
| GENERAL INFORMATION:
| APPLICANT: Wainer, George
| APPLICANT: Hartmann, Gunther
| TITLE OF INVENTION: Cell Lysis and Treating Cancer
| FILE REFERENCE: C1039/7052 (AMS)
| CURRENT APPLICATION NUMBER: US/09/888,326
| CURRENT FILING DATE: 2001-06-22
| PRIOR PILING DATE: 2000-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 5.6; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 20; DB 3; Length 20;
100.0%; Pred. No. 5.6;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTHER INFORMATION: Synthetic oligonucleotide US-09-888-326-561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature

| LOCATION: (0) ... (0)

| OTHER INFORMATION: phosphorothioate backbone

US-09-888-326-560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 848
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 561
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rccargacgriccrgacgrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
US-09-888-326-562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-888-326-561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 20; DB 3; Length 20; Pred. No. 5.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-920-313-90

Sequence 90, Application US/09920313

Sequence 90, Application US/09920313

Publication No. US20020198165A1

GENERAL INFORMATION:

APPLICANT: Bratzler, Robert L.

APPLICANT: Bretzler, Deanna M.

TITLE OF INVENTION: Nucleic Acids for the Prevention and TITLE OF INVENTION: Treatment of Gastric Ulcers

FILE REPRENCE: C1037/7019 (HCL/MAD.)

CURRENT APPLICATION NUMBER: US/09/920,313

CURRENT FILING DATE: 2001-08-01

PRIOR FILING DATE: 2001-08-08

NUMBER OF SEQ ID NOS: 148

SOFTHARE: EastSEQ for Windows Version 3.0

SEQ ID NO 9

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                           Sequence 86. Application US/09920313
; Publication No. US20020198165A1
; Fublication No. US20020198165A1
; GENERAL INFORMATION:
A APPLICANT: Petersen, Deanna M.
TITLE OF INVENTION: Nucleic Acids for the Prevention
TITLE OF INVENTION: Treatment of Gastric Ulcers
TITLE ROF INVENTION: Treatment of Gastric Ulcers
TITLE ROF INVENTION: Nucleic Acids for the Prevention
TITLE OF INVENTION: Treatment of Gastric Ulcers
TITLE ROF INVENTION: NUCLEIC Acids for the Prevention
TITLE OF INVENTION: Treatment of Gastric Ulcers
TITLE ROF ILLING DATE: 2001-08-01
; PRIOR PILLING DATE: 2001-08-08
; NUMBER OF SEQ ID NOS: 148
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 86
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ) OTHER INFORMATION: Synthetic Sequence US-09-920-313-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 rccardacerrccrdacerr 20
                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                        1 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-920-313-90
                                                                                                                                                                                                                                                                  US-09-920-313-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                윱
                                                                                                          ઠે
```

ô

ö

```
Sequence 562, Application US/0988326
Publication No. US20030026801A1
GENERAL INFORMATION:
APPLICANT: Welner, George
APPLICANT: Welner, George
TITLE OF INVERTION: Cell Lyais and Treating Cancer
TITLE OF INVERTION: Cell Lyais and Treating Cancer
TITLE OF INVERTION: Cell Lyais and Treating Cancer
FILE REPERENCE: C1039/052 AMS)
CURRENT APPLICATION NUMBER: US 60/213,346
PRIOR PILING DATE: 2001-06-22
NUMBER OF SEQ ID NOS: 848
SOFTWARE: FeatSEQ for Windows Version 3.0
IENGTH: 20
TYPE: DNA
ORGANISM: Artificial Sequence
FRATURE:
OTHER INFORMATION: Synthetic oligonucleotide
NAME/KEY: misc feature
LOCATION: (0)...(0)
OTHER INFORMATION: chimeric phosphorothioate/phosphodiester backbone
OTHER INFORMATION: with phosphorothioate at 5' and 3' ends
US-09-888-326-562
Query Match
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
```

Search completed: May 4, 2006, 09:01:07 Job time : 298.851 secs

1 TCCATGACGTTCCTGACGTT 20

8 8

CA113844 SCGGLB103
CW44501 fsbb001f1
CA109803 SCUTHR106
CA153904 SCVPRE203
CA264770 SCAGRT304
CA182313 SCBGST311
BU253412 603418072
CC110844 NDL.76114
DR806582 ZM BFb003
CG314934 OĞWRR04TH
ALZ05647 Tetraodon
BU205165 603951055
ALA42653 Tetraodon
CG319646 OGOAZ34TV
CG319646 OFYZA BAL

Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Minimum DB Maximum DB

Database

```
Oryza sativa (indica cultivar-group)

Estativa (indica cultivar-group)

Estativar-group)

Estativar-group)
                                                                                                                                                                                                                                                                                                                                                                                                                                    CL978668 1.00 498 bp DNA linear GSS 21-SEP OSIFCC032298 Oryza sativa Express Library Oryza sativa (indica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Oryza sativa (indica cultivar-group)"
/mol_type="genomic DNA"
/mol_type="genomic DNA"
/mol_type="genomic DNA"
/clone lib="Oryza sativa Express Library"
/note="Oryza sativa exon trapped genomic sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 498;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                cultivar-group) genomic, genomic survey sequence. CL978668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20; DB
Pred. No. 46;
); Mismatches
                                                                                                                                                                                                                                                                                                                                                              ALIGNMENTS
                                                                                                                                         CG334934
CC832006
BU205165
CNSO3G84
CG319646
CG319646
CG31981330
CD791886
CG31981330
CG391830
CG3918342
CG39404
CNSO4024
CNSO4021
CNSO4021
CA113844
CW444501
CA109803
CA153904
CA264770
CA182313
BU253412
CV181077
CC118044
DR806582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Scc
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CL978668.1 GI:52411839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83 TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rice genomic sequence.
Class: exon-trapped.
                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20; Conservative
                                                       Query Match
Best Local Similarity
 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                     CL978668/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
 ORIGIN
                            0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CL978668 OSIFCC032
CW048683 104_287_1
CW036410 104_267_1
CW036410 104_267_1
CW0328960 000601AEP
CL970339 OSIFCC041
CW124513 104_504_1
CW124513 104_504_1
CW124513 104_504_1
CW124513 104_504_1
CW124513 104_504_1
CW126523 OSIFCC012
BF713668 BSTPBL23_2
CC560549 CG2CK84TV
AC171941 zp24f01.8
CL179555 104_388_1
CL179555 104_652_1
BF7156008 RCO_FF095
CW17955 104_652_1
BF7156008 RCO_FF095
AW065908 687002G08
                                                                                             May 4, 2006, 02:45:02; Search time 1417.59 Seconds (without alignments) 660.095 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                      82156650
            GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                        41078325 segs, 23393541228 residues
                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CL978668
CM048865
CW036410
CW026980
CC709713
CW1928980
CM062877
CW124513
CW31458
CW31458
CW31458
CW31458
CW31458
CW31458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA171941
CL179555
CW218453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BF156008
AW065908
CA158051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CG260054
                                                                                                                                                                                   1 tecatgaegtteetgaegtt 20
                                                                                                                                                                                                            IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                              seq length: 0
seq length: 200000000
                                                                                                                                               US-10-789-758A-1
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                              90 est1:*
90 est2:*
90 est2:*
90 est2:*
90 est5:*
90 est5:*
90 est7:*
90 est7:*
90 est7:*
90 est7:*
```

ö

Gaps

ö

16.8 16.8 16.8 16.8 16.8 16.8

Result Š.

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
CW036410/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CW048863 114 30211 Sorghum methylation filtered library (Libip: 104) Sorghum bicolor genomic clone 10513675, genomic survey
                GSS 21-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sorghum bicolor

Sukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.

1 (basea: 1 to 372)
Bedell, J.A., Budiman, M.A., Nunberg, A., Citek, R.W., Robbins, D.,
Jones, J., Flick, E., Rohlfing, T., Fries, J., Bradford, K.,
Jones, J., Smith, M., Holeman, H., Roe, B.A, Wiley, G., Korf, I.F.,
Rabinowicz, D., Lakey, N., McCombie, W.R., Jeddellh, J.A. and
Martienssen, R.A.
                                                                                                                                                 Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Sukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzae; Oryza.
Ehrhartoideae; Oryzae; Oryza.
Map.L., Wangc,J., Chen,C., Liu,X., Su,N., Li,L., Wang,X., Cao,M., Jiao,Y., Sun,N., Zhang,X., Bao,J., Sun,D., Zhao,H., Yuan,L., Wong,G.K.S., Deng,X.W. and Wang,J.
Manalysis of transcriptional regulation of the rice genome and the comparison to Arabidopsis
                              OBIFCC012295 Oryza sativa Express Library Oryza sativa (indica cultivar-group) genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Oryza sativa (indica cultivar-group)"
/mol_type="genomic DNA"
/mol_type="genomic DN4"
/mol_type="genomic By46"
/clone llb="Oryza sativa Express Library"
/note="Oryza sativa exon trapped genomic sequences"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0%; Pred. No. 54;
Matches 20; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sorghum genome sequencing by methylation filtration PLOS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Chen Chen
Department of Bioinformatic
Beijing Institute of Genomics
Thinese Academy of Sciences, Beijing 101300, China
Tel: 86-10-80481559
Fax: 86-10-80488676
                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: chenchen@genomics.org.cn
Rice genomic sequence.
Class: exon-trapped.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2354 TCCATGACGTTCCTGACGTT 2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CW048863.1 GI:54725593
                                                                                                         CL978665.1 GI:52411833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Bedell JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
CW048863
                                                                                         CL978665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                           VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CW048863/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
PUBMED
COMMENT
CL978665/c
                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                         ACCESSION
                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
CW036410 10503742 114 30374 Sorghum methylation filtered library (LibID: 104) Sorghum bicolor genomic clone 10503742, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Organ: leaf; Vector: pBCSK(-); Site 1: Hincil; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into Hincil-digested pBCSK(-) vector and electroporated into B. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD calde; Panicoldeae; Andropogoneae; Sorghum.

(bases 1 to 460)

Bedell,J.A., Budiman,M.A., Nunberg,A., Citek,R.W., Robbins,D., Jones,J., Flick,E., Rohlfing,T., Fries,J., Bradford,K., McMenam,J., Smith,M., Holeman,H., Roe,B.A., Wiley,G., Korf,I.F., Martienssen,R.A.

Martienssen,R.A.
                                                                                                                                                                                                                                                             /organism="Sorghum bicolor"
/mol_type="genomic DNA"
/cultivar="ATX623"
/db_xref="taxon:4558"
/clone="10513675"
/clone=lib="Sorghum methylation filtered library (LibID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 372;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sorghum genome sequencing by methylation filtration PLOS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Bedell JA
Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO 63108, USA
Tel: 314 615 6979
Eax: 314 615 5975
Email: jbedell@oriongenomics.com
                  St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92.0%; Score 18.4; DB 10;
95.0%; Pred. No. 2.8e+02;
iive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Sorghum bicolor"
/mol type="genomic DNA"
/cultivar="ATx623"
                                                                                         Enail: jbedell@oriongenomics.com
Plate: 287 row: m column: 17
Seg primer: M13/pUC Forward
Class: methylation filtered
High quality sequence stop: 372.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 460.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plate: 267 row: k column: 20
Seg primer: M13/pUC Forward
Class: methylation filtered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              267 TCCATGACGTTCCGGACGTT 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sorghum bicolor (sorghum)
Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CW036410.1 GI:54713140
          4041 Forest Park Ave,
Tel: 314 615 6979
Fax: 314 615 5975
Orion Genomics, LLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
nes 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15660154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CW036410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CW036410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
```

ò

```
Malus x domestica
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons;
rosids; eurosids I; Rosales; Rosaceae; Maloideae; Malus.
I (bases 1 to 658)
Beuning,L., Bowen,J., Crowhurst,R., Gleave,A., Janssen,B.,
McAttney,S., Newcomb,R., Ross,G., Snowden,K., Walton,E. and Yauk,Y.
Unpublished (2004)
Contact: Gleave,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             сызтоззу 1062 bp DNA linear GSS 21-SEP-2004 OBIFCC041133 Oryza sativa Express Library Oryza sativa (indica cultivar-group) genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
I (bases 1 to 1062)
Ma,L., Wangc,J., Chen,C., Liu,X., Su,N., Li,L., Wang,X., Cao,M., Jiao,Y., Sun,N., Zhang,X., Bao,J., Sun,D., Zhao,H., Yuan,L., Wong,G.K.S., Deng,X.W. and Wang,J.
An analysis of transcriptional regulation of the rice genome and its comparison to Arabidopsis
Unpublished (2004)
    000601AEPA006237HT (AEPA) Pinkie expanding leaf Malus x domestica cDNA clone AEPA006237, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                             Sequencing Facility
The Horticulture and Food Research Institute of New Zealand Ltd
120 Mt Albert Rd, Mt Albert, Auckland, New Zealand
Tel: 00 64 09 815 4200
Fax: 00 64 09 815 4201
Email: est@horiresearch.co.nz.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="Leaf"
/dev stage="Expanding"
/clone_lib="(ABRA) Pinkie expanding leaf"
/none="Vector: pBK-CWV; Library sequenced by Genesis
Research & Development"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 698;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Chen Chen
Department of Bioinformatic
Beijing Institute of Genomics
Chinese Academy of Sciences, Beijing 101300, China
Tel: 86-10-80481559
Fax: 86-10-80488676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 17.4; DB 7;
Pred. No. 9.3e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Malus x domestica"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: chenchen@genomics.org.cn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="mRNA"
/db_xref="taxon:3750"
/clone="AEPA006237"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86 TCAATGACGTTCCTGACGT 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGT 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CL970339.1 GI:52395287
                                                                    CN928980.1 GI:48401793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rice genomic sequence.
Class: exon-trapped.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87.0%;
llarity 94.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
nes 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                               VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
    DEFINITION
                                                                                                                                                                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CL970339/c
                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                 Inote="Organ: leaf, Vector: pBCSK(-); Site 1: HincII; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electropozated into E. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OGUBY23TV ZM_0.7_1.5_KB Zea mays genomic clone ZMWBMa0404D21, genomic survey sequence.
                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 07-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Zea.
/db_xref="taxon:4558"
/clone="10503742"
/clone_lib="Sorghum methylation filtered library (LibID:
104)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 886)
Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T.,
Resnick, A., Fraser, C.M., Budiman, M.A., Bedell, J.A., Rohlfing, T.,
Citek, R.W., Nunberg, A., Robbins, D. and Lakey, N.
Unpublished (2002)
Other GSSs: OGUNY23TH
Contact: Cathy Whitelaw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Zea mays"
/mol type="genomic DNA"
/mol type="genomic DNA"
/mol type="genomic DNA"
/db xref="taxon:4577"
/clone="ZMMBMa0404021"
/clone="ZMMBMa0404021"
/note="Woctor: PBGSK-; Site 1: HincII; 0.7-1.5 kb
methylation filtered genomic DNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                Length 460;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.0%; Score 18.4; DB 9; Length 886; 95.0%; Pred. No. 3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9712 Medical Center Drive, Rockville, MD 20850, USA
Tel: 301-838-5843
Fax: 301-838-0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                             92.0%; Score 18.4; DB 10; 95.0%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dq 869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seg primer: TF
Class: methylation filtered.
                                                                                                                                                                                                                                                                                                                                                                          291 TCCATGACGTTCCGGACGTT 272
                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31 TCCATGACGTTCCGGACGTT 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: whitelaw@tigr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC709713
CC709713.1 GI:32114489
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                             Best Local Similarity 95.0 Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zea mays
Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CN928980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IIGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 19
                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
CC709713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 6
CN928980
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
```

셤 δ

ö

FEATURES

ORIGIN

```
CW124513 659 bp DNA linear GSS 29-OCT-2004 104 504 11111819 148 34701 042 Sorghum methylation filtered library (LibiD: 104) Sorghum bicolor genomic clone 11111819, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Organ: leaf; Vector: pBCSK(-); Site 1: HincII; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 bf fraction, ligated into HincII-digested pBCSK(-) vector and electroporated into E. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CW372789 687 bp DNA linear GSS 01-NOV-2004 fsbb001f048n16f0 Sorghum methylation filtered library (LibID: 104) Sorghum bicolor genomic clone fsbb001f048n16, genomic survey
                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panticoideae; Andropogoneae; Sorghum.

(Dases 1 to 659)

Bedell, J.A., Budiman, M.A., Nunberg, A., Citek, R.W., Robbins, D., Jones, J., Flick, B., Rohlfing, T., Fries, J., Bradford, K., McMenamy, J., Smith, M., Holeman, H., Roe, B.A., Wiley, G., Korf, I.F., Martienssen, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organiem="Sorghum bicolor"
/mol_type="agreomic DNA"
/cultivar="ATx623"
/db_xref="taxon:4558"
/clone="1111819"
/clone="lib="Sorghum methylation filtered library (LibID: 104)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85.0%; Score 17; DB 10; Length 659; 100.0%; Pred. No. 1.5e+03; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sorghum genome sequencing by methylation filtration PLoS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO 63108, USA
Tel: 314 615 6979
Fax: 314 615 5975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     545 TCCATGACGTTCCTGAC 529
317 TCCATGACGTTCCTGAC 333
                                                                                                                                                                                                                                                              CW124513.1 GI:54817060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CW372789.1 GI:55091233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Bedell JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17; Conservative
                                                                                                                                                                                                                                                                                                                                      Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence.
                                                                                                                                                                                                                  sequence.
CW124513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                          LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CW372789/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                             RESULT 9
CW124513/c
                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CW062877 562 bp DNA linear GSS 28-OCT-2004 104 308 10521584 1 30092 Sorghum methylation filtered library (LibID: 104) Sorghum bicolor genomic clone 10521584, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Organ: leaf; Vector: pBCSK(-); Site_1: HinclI; DNA prepared from purified nuclei was randomly_sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electroporated into E. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta; Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD Clade, Panicoideae; Andropogoneae; Sorghum.

1 (Bases 1 to 562)
Bedell, J.A., Budiman, M.A., Nunberg, A., Citek, R.W., Robbins, D., Jones, J., Plick, E., Rohlfing, T., Fries, J., Bradford, K., Robbins, D., McMenamy, J., Smith, M., Holeman, H., Roe, B.A., Wiley, G., Korf, I.P., Rabinowicz, P.D., Lakey, N., McCombie, W.R., Jeddeloh, J.A. and Martiensean, R.A.

Sorghum genome sequencing by methylation filtration

FLOS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:4558"
/clone="10521564"
/clone_lib="Sorghum methylation filtered library (LibID:
104)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                 Gaps
                                                                                                                    Library"
genomic sequences
                                              (indica cultivar-group) "
                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                  Length 1062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO 63108, USA
17e1: 314 615 6979
Fax: 314 615 5975
Email: jbedell@oriongenomics.com
Plate: 308 row: g column: 06
Seq primer: M13(40) Forward
Class: methylation filtered
High quality sequence stop: 562.
                             1. .1062
/organism="Oryza sativa (indica cu
/mol_type="genomic DNA"
/mol_type="texon:39946"
/clone_lib="Oryza sativa Express |
/note="Oryza sativa exon trapped ;
                                                                                                                                                                                                             87.0%; Score 17.4; DB 10;
94.7%; Pred. No. 9.7e+02;
iive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 100.0%; Score 17; DB 10; I Similarity 100.0%; Pred. No. 1.4e+03; 7; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'organism="Sorghum bicolor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="genomic DNA" /cultivar="ATx623"
  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                           TCCATGACGTTCCTGGCGT 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sorghum bicolor (sorghum)
Sorghum bicolor
                                                                                                                                                                                                                                                                                                                TCCATGACGTTCCTGACGT 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CW062877.1 GI:54739607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                             Query Match
Best Local Similarity 94.7%;
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Bedell JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15660154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S:
Matches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
ORGANISM
                                Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
```

TITLE JOURNAL PUBMED

FEATURES

ORIGIN

ò

REFERENCE AUTHORS

ACCESSION

RESULT 8 CW062877

ઠે 셤 ö

Gaps ö GSS 01-NOV-2004

```
1. .703./
/organism="Oryza punctata"
/mol_type="genomic DNA"
/db xref="teaxon: 4537"
/clone="OP_Ba0057L22"
/tissue type="young leaves"
/lab_host="DH10B-T1 phage resistant"
/clone lib="OP_Ba"
/note="Vector: pAGIBAC1; Site_1: HindIII; Site_2: HindIII"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CW031589 782 bp DNA linear GSS 28-OCT-2004 104 260_10500896_114_30365_Sorghum methylation filtered library (LibID: 104) Sorghum bicolor genomic clone 10500896, genomic survey
                    Email: sjackson@purdue.edu
Basecalling by phred version 0.020425.c. This sequence was derived
from the raw sequence read by clipping with lucy version 1.198.
Bases 36-738 of the raw sequence (length 1024) were retained after
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae, PACCAD Calde; Panicoideae; Andropogoneae; Sorghum.

(Dases 1 to 782)

Bedell,J.A., Budiman,M.A., Nunberg,A., Citek,R.W., Robbins,D., Jones,J., Rlick,B., Rohlfing,T., Fries,J., Bradford,K., McMenamy,J., Smith,M., Holeman,H., Roe,B.M., Wiley,G., Korf,I.F., Rabinowicz,P.D., Lakey,N., McCombie,W.R., Jeddeloh,J.A. and Martienssen,R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 85.0%; Score 17; DB 10; Length 703; Best Local Similarity 100.0%; Pred. No. 1.5e+03; Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sorghum genome sequencing by methylation filtration PLoS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PLOS COLLAGE BEGGEL JA CONTACT: BedGEL JA CONTACT: BedGEL JA OLION GENOMICS, LLC 4041 POTERT PATE AVE, St. Louis, MO 63108, USA Tel: 314 615 6979
Fax: 314 615 6979
Fax: 314 615 5975
Email: jbedgel@oriongenomics.com
Plate: 200 row: e column: 06
Seg primer: M13/pUC Forward
Class: methylation filtered
High quality sequence stop: 782.
Location/Qualifiers
                                                                                                                   Clipping.
PCR PRIMERS
PCR PRIMERS
PORWARD: TAA TAC GAC TCA CTA TAG GG
BACKWARD: CAC TCA TTA GGC ACC CCA
INSERT Length: 161 Std Error: 0.00
Plate: 0057 row: L column: 22
Seq primer: TAA TAC GAC TCA CTA TAG GG
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Sorghum bicolor"
/mol type="genomic DNA"
/cultivar="ATx623"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db xref="taxon:4558"
                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sorghum bicolor (sorghum)
Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                259 TCCATGACGTTCCTGAC 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CW031589
CW031589.1 GI:54708321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
CW031589
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SM Oryza punctata

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopeida; Poalee; Poaceae;

En thartoideae; Oryzae; Oryza.

I (bases 1 to 703)

SanMiquel, P., Westerman, R., Kim, H., Yu, Y., Wissotski, M., Yost, D.,

Stum, D., Rao, K., Luo, M., Jetty, R., Kudrna, D., Muller, C.,

Hatfield, J., Soderlund, C., Wing, R. and Jackson, S.A.

Contact: Scott A. Jackson
Jackson Laboratory

Purdue University

Purdue University

Purdue University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OP Ba0057L22.f OP Ba Oryza punctata genomic clone OP Ba0057L22 5' genomic survey sequence.
CW631458 GI:54665420 GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Organ: leaf; Vector: pBCSK(-); Site_1: HincII; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electropozated into E. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnollophyta; Liliopaida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Sorghum.

(Dases 1 to 687)
Bedell, J.A., Budiman, M.A., Nunberg, A., Citek, R.W., Robbins, D., Mones, J., Flick, B., Rohlfing, T., Fries, J., Bradford, K., McMenamy, J., Smith, M., Holeman, H., Roe, B.A, Wiley, G., Korf, I.F., Martienssen, R.D., Lakey, N., McCombie, W.R., Jeddeloh, J.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Sorghum bicolor"
/mol type="genomic DNA"
/cultivar="ATx623"
/db xref="texon:4558"
/clone="febb001f048n16"
/clone="febb001f048n16"
/clone=lib="Sorghum methylation filtered library (LibID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 687;
                                                                                                                                                                                                                                                 Sorghum genome sequencing by methylation filtration PLoS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         915 W. State St., West Lafayette, IN 47907, USA
Tel: 7654963621
                                                                                                                                                                                                                                                                                                                Contact: Bedell JA
Orion Genomics, LLC
4041 Perset Park Ave, St. Louis, MO 63108, USA
141 1314 615 6979
Fax: 314 615 5975
Email: jbedellooriongenomics.com
Seq primer: f Porward
Forward
Forward
Forward
Forward
Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85.0%; Score 17; DB 10; I 100.0%; Pred. No. 1.5e+03; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Class: methylation filtered
High quality sequence stop: 687.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          102 TCCATGACGTTCCTGAC 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryza punctata
                                                                                                                                                                                                                                                                                                  15660154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                              TITLE
JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CW631458/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
COMMENT
                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
```

셤 ઠે

ö

ö

ORIGIN

à

```
Oryza sativa (indica cultivar-group)

Oryza sativa (indica cultivar-group)

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzae; Diliopsida; Poales; Poaceae; Ehrhartoideae; Oryzae; Diliopsida; Poales; Poaceae; Dryza; Disabatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Dryza; Diao,Y.; Sun,N.; Zhang,X.; Bao,J.; Sun,D.; Zhao,H.; Yuan,L.; Wangc,J.; Deng,X.; M. and Wang,J.; Mangc,J.; Sun,N.; Zhao,H.; Yuan,L.; Wangc,J.; Sun,D.; Zhao,H.; Yuan,L.; Wang,C.K.S.; Deng,X.; M. and Wang,J.; Manglysis of transcriptional regulation of the rice genome and its comparison to Arabidopsis

Unpublished (2004)

Contact: Chen Chen
Department of Bioinformatic
Beijing Institute of Genomics
Chinese Academy of Sciences, Beijing 101300, China
Tel: 86-10-80488656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         287 bp mRNA linear EST 31-DEC-2001
BL223, mRNA sequence.
BF713668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                            CLY652/3 2805 bp DNA linear GSS 21-SEP-2004
01FCC012064 Oryza sativa Express Library Oryza sativa (indica
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Oryza sativa (indica cultivar-group)"
/mol type="genomic DNA"
/mol type="genomic DNA"
/mol type="genomic DNA"
/clone lib="Gryza sativa Express Library"
/note="Oryza sativa exon trapped genomic sequences"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85.0%; Score 17; DB 10; Length 2805; 100.0%; Pred. No. 1.7e+03; ive 0; Mismatches 0; Indels
                                                          85.0%; Score 17; DB 6; Length 1088; 100.0%; Pred. No. 1.5e+03; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                    cultivar-group) genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 287)
Ponsuksili,S., Wimmers,K. and Schellander,K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: chenchen@genomics.org.cn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2372 TCCATGACGTTCCTGAC 2356
                                                                                                                                                                                                                                                                                                                                                                                                                                         CL965273.1 GI:52385237
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BF713668.1 GI:18002858
                                                                                                                                                                                                    308 TCCATGACGTTCCTGAC 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                    1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rice genomic sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Class: exon-trapped
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sus scrofa (pig)
Sus scrofa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sug.
                                                                                                                                                                                                                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                            RESULT 14
CL965273/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BF713668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                  셤
                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="Taxxon:65923"
/db_xref="Taxxon:65923"
/dbo=="CDA74-A09"
/fbo=="CDA74-A09"
/flesue type="leads and internal organs combined"
/tissue type="leads and internal organs combined"
/dev_stage="adult"
/dev_stage="adult"
/dev_stage="adult"
/clone_lib="SHGG-CDA"
/clone_lib="SHGG-CDA"
/clone_lib="SHGG-CDA"
/clone_lib="shGG-CDA"
/clone="Vector: lambda ZAP Express/pBK-CMV; Site_1: ECORI
/clone="Vector: lambda ZAP Express/pBK-CMV; Site_1: ECORI
/clone="Vector: lambda ZAP Express/pBK-CMV; Site_1: ECORI
/clone="Vector: lambda ZAP primed with
a a 50 bp linker primer containing an oligo dT sequence
preceeded by a synthetic Xhol site. 5 prime adaptors were
used containing an ECORI cohesive end. The finished cDNAs
were inserted in to the ZAP express vector
unidizectionally in the sense orientation with respect to
the lacz promoter of pBK-CWV. An amplified library was
prepared from approximately 3 million primary clones in
the lambda ZAP Express vector. In vivo excision was then
used to generate individual pBK-CMV phagemid clones for
EST sequencing."
                                                                                     /note="Organ: leaf; Vector: pBCSK(-); Site_1: HincII; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electropozated into E. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDA74-A09.x1d-t SHGC-CDA Gasterosteus aculeatus cDNA clone CDA74-A09 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Kingsley, DM
HHM1 and Department of Developmental Biology
Stanford University School of Medicine
Beckman Center B300, 279 Campus Drive, Stanford, CA 94305-5329, USA
Tel: 550 725 5954
Fax: 650 725 7739
Email: kingsley@cmgm.stanford.edu
                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gasterosteus aculeatus (three spined stickleback)
Gasterosteus aculeatus
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Actinopterygli, Neopterygli, Teleostei, Euteleostei, Neoteleostei,
Acanthomorpha, Acanthopterygli, Percomorpha; Gasterosteiformes;
Gasterosteidae, Gasterosteus.
I (bases 1 to 1088)
Kingsley, D.M., Peichel, C., Balabahdra, S., Grimwood, J., Dickson, M., Schmutz, J. and Myers, R.M.
/clone="10500896"
/clone_llb="Sorghum methylation filtered library (LibID:
104)"
                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                 .;
0
                                                                                                                                                                                                                                                                                            Length 782;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Expressed sequence tags from Gasterosteus aculeatus Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High quality sequence stop: 772.
Location/Qualiflers
1. 1088
/organism="Gasterosteus aculeatus"
/mol_type="mRNA"
/strain="Salinas_river, CA"
                                                                                                                                                                                                                                                                                            85.0%; Score 17; DB 10; L
100.0%; Pred. No. 1.5e+03;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                 330 TCCATGACGTTCCTGAC 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CD505499
CD505499.1 GI:31436068
                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CD505499
```

ö

```
Identification of porcine liver ESTs by differential display RT-PCR Unpublished (2001)
Contact: Ponsuksili S
Unstitute of Animal Breeding Science
University of Bonn
Endentcher Allee 15, Bonn 53115, Germany
Seq primer: T7 SP6
High quality sequence stop: 287
POLYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                             Location/Qualifiers

1. .287

Corganism="Sus scrofa"

/mol_type="mRNA"

/db_xref="taxnn:9823"

/clone="BL223"

/clone="lib="differential display RT-PCR clones"

/note="Yogan: liver; cDNA fragments obtained from differential display RT-PCR banding patterns were cloned into pGEM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 84.0%; Score 16.8; DB 2; Length 287; Best Local Similarity 90.0%; Pred. No. 1.7e+03; Matches 18; Conservative 0; Mismatches 2; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
    TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
```

Search completed: May 4, 2006, 07:17:44 Job time: 1417.59 secs

g ò

```
PAT 31-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 16-JUN-2001
                                     Sequence
Sequence
Sequence
                                                                                      Sequence
Sequence
Sequence
                                                                                                                                                        Sequence
Sequence
                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                           Sequence
Sequence
                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                     Sequence
                                                                                                                                        Sequence
                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unclussified.
Unclassified.
Unclassified.
1 (bases 1 to 20)
Bachmaier,K., Hessel,A.John., Neu,N. and Penninger,J.Martin.
Bachmaier,K., Hessel,A.John., Neu,N. and Penninger,J.Martin.
Beptides capable of modulating inflammatory heart disease
Patent: US 59c265-A 12 05-00T-1999;
Location/Qualifiers
                 CQ753470 (CQ753471 (CQ753471 (CQ753471 (CQ768113 (CQ788113 (CQ82554) (CQ82554) (CQ888029 (CQ88802) (CQ88802) (CQ88802) (CQ88802) (CQ88802) (CQ892043 (CQ892043 (CQ977069 (CQ9770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
Unclassified.
1 (bases 1 to 20)
Krieg, A.M., Kline, J., Klinman, D. and Steinberg, A.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR078395 20 bp 1
Sequence 12 from patent US 5962636.
AR078395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 from patent US 6207646.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20;
Pred. No. 1
BD270817
CQ753470
CQ763471
CQ768374
CQ74838
CQ788133
CQ788133
CQ888133
CQ888163
CQ888163
CQ888163
CQ888164
CQ888167
CQ8871068
CQ977067
CQ977068
CQ977067
CQ977067
CQ977067
CQ977067
CQ977067
CQ977067
CQ977068
CQ977067
CQ977067
CQ977067
CQ977067
CQ977067
CQ977067
CQ977068
CQ977067
CQ97707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Sco
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:10005141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR140451.1 GI:14482947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR078395.1
   Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT: 1
AR078395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR140451
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR078395 Sequence
AR146181 Sequence
AR146398 Sequence
AR146393 Sequence
AR154681 Sequence
BD069973 Use of nu
BD190417 Microemul
BD205615 Method of
BD225610 Compositi
BD222610 Compositi
BD22155 Enhanceme
BD261155 Methods a
BD261157 Methods a
BD261151 Methods a
BD261311 Methods a
BD261311 Methods a
BD261313 Methods a
                                                                                                               4, 2006, 02:22:43 ; Search time 464.368 Seconds (without alignments) 2448.208 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                             11766282
                 GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                         5883141 seqs, 28421725653 residues
                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR140451
AR146398
AR146393
AR154681
BD069973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD190417
BD205610
BD205615
BD222610
BD251265
BD261152
BD261157
BD261307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BD261311
BD261560
BD267913
BD270813
                                                                                                                                                                                                                       1 tccatgacgttcctgacgtt 20
                                                                                                                                                                                                                                                     IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 200000000
                                                                                                                                                                                     US-10-789-758A-1
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9b ba: *
9b in: *
9b om: *
9b om: *
9b or: *
9b pr: *
9b pr: *
9b sr: *
9b sr: *
9b sr: *
9b sr: *
9b br: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          66:
7:
7:
110:
112:
143:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic
                                                                                                                                                                                                                                                                                                                                                                             Minimum DB
Maximum DB
                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                  Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
```

ð

```
synthetic construct
synthetic construct
schwartz, D.A. and Krieg, A.M.
Schwartz, D.A. and Krieg, A.M.
Use of nucleic acids containing unmethylated CPG dinucleotide in
the treatment of LDF2-associated disorders
batchicial Sequence
Narificial Sequence
CS Schribetic Oligonucleotide
FT CS Schribetic Oligonucleotide
F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                     PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD069973
Use of nucleic acids containing unmethylated CPG dinucleotide in the treatment of LPS-associated disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism='Artificial Sequence'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 18; 0; Indels ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6; Length 20;
                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                           Unclassified.

1 (bases 1 to 20)
Krieg,A.m. and Kline,J.N.
Immunostimulatory nucleic acid molecules
Patent: US 6239116-A 10 29-MAY-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1..20
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB
100.0%; Pred. No. 18;
iive 0; Mismatches
                                                                                                                                     AR154681 20 bp | C
Sequence 10 from patent US 6239116.
AR154681
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD069973
BD069973.1 GI:22615576
JP 2001513776-A/62.
                                                                                                                                                                                                     AR154681.1 GI:15122734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 rccargacgrrccrgacgrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                        DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                            KEYWORDS
                                                                                             RESULT 5
AR154681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD069973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                o;
                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown...
Unknown:
Unclassified.
1 (bases 1 to 20)
1 (bases 1 to 20)
KriegA.M. and Weiner,G.
KriegA.M. and Weiner,G.
Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines
Patent: US 6218371-A 100 17-APR-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unclassified.

1 (Dases 1 to 20)

1 (Dases 1 to 20)

Krieg, A.M. and Weiner, G.

Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines Patent: US 621871.A 105 17-APR-2001;

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
0
                                                                                                                                                                                  Score 20; DB 6; Length 20;
Pred. No. 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; DB 6; Length 20; llarity 100.0%; Pred. No. 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
    Immunostimulatory nucleic acid molecules Patent: US 6207646-A 10 27-MAR-2001; Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 18;
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR146393 20 bp DN
Sequence 105 from patent US 6218371.
AR146393.1 GI:15109582
                                                                                                                                                                                                                                                                                                                                                                                                                                      20 bp Dl
Seguence 100 from patent US 6218371.
AR146388

    .20
    /organism="unknown"
    /mol_type="unassigned DNA"

                                                                                                                                                                                                                                 0; Mismatches
                                                                        1. .20
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR146388.1 GI:15109577
                                                                                                                                                                                    100.0%;
                                                                                                                                                                               Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
    TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
AR146388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR146393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

Gaps

ö

g

```
BD205615

20 bp DNA linear PAT 17-JUL-2003
Method of controlling hematopoiesis by using CpG oligonucleotide.
BD205615.1 GI:33015385
JP 2002514397-A/105.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DUZZZ61U 20 bp DNA linear PAT 17-JUL-2003
Compositions of CPG and saponin adjuvants and uses thereof.
BD222610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD222610.1 GI:33032380
JP 2002522510-A/2.
Quillaja saponaria
Quillaja saponaria
Quillaja saponaria
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons; rosids; eurosids I; Fabales; Quillajaceae; Quillaja.
/organism='Artificial Sequence'. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6; Length 20;
                                                                                                                                                                                              Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                              .
9

    .20
    forganism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"

    .20
    forganism="synthetic construct"
|mol_type="genomic DNA"
|db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB 100.0%; Pred. No. 18; Live 0; Mismatches
                                                                                                                                                                                          th 100.0%; Score 20; DB Similarity 100.0%; Pred. No. 18; 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 20)
Kensil, C.A.
         F
                                                                                                                                                                                          Query Match
Best Local Si
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
ORGANISM
                                                          Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 9
BD205615
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BD222610
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Decomposition of the construct synthetic construct construct construct synthetic synthetic construct synthetic synth
                                                                                                                                                                                                                                                 synthetic construct
SM synthetic construct
construct
construct
other sequences; artificial sequences.
E 1 (bases 1 to 20)
E 2 (bases 1 to 20)
Ott, G.S. and Obagan, D.
Microemulaions with Adsorbed Macromoelecules and Microparticles
L Patent: JP 2002537102-A 1 05-NOV-2002;
Chiron Corporation
OS Artificial Sequence
PN JP 2002537102-A/1
PD 05-NOV-2002
PP 09-FBB-2000 JP 2000600618
PR 29-JUL-1999 US 60/146391,28-OCT-1999 US 60/161997, PR 26-PBB-1999 US 60/121888
PI john barackman, manmohan simph, mildred ugozoli, jina kazazu, john
                                                                                                                                buryu417 20 bp DNA linear PAT 17-JUL-2003 Microemulsions with Adsorbed Macromoelecules and Microparticles. BD190417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD205610 20 bp DNA linear PAT 17-JUL-2003 Method of controlling hematopoiesis by using CpG oligonucleotide. BD205610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  john barackman, manmohan simph, mildred ugozoli, jina kazazu, john
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 20; DB 6; Length 20; Best Local Similarity 100.0%; Pred. No. 18; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ott, derek ohagan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                  BD190417.1 GI:33000156
JP 2002537102-A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD205610.1 GI:33015380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gary s ott,derek
Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  donnelly,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E E SE
                                                                                                                                                             DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                   RESULT 7
BD190417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 8
BD205610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
```

ò

ö

Gaps

ö

. .

```
DIVERLING. 1 USINGLY.

SINCELLY, 1 USINGLY.

Synthetic construct

Synthetic construct

Synthetic construct

Construct

Other sequences; artificial sequences.

Strieg.A.M. and Weiner.G.

Methods and products for stimulating the immune system using immunocherapeutic oligonuclectides and cytokines

IN PRIORITY OF IOWA RESEARCH FOUNDATION

OS Artificial Sequence

NO 19-APR-1099 JP 2000542030

PR 03-APR-1999 UP 2000542030

PR 03-APR-1999 US 60/080729

PR 03-APR-1999 US 60/080729

PR ARTHUR M KRIEG, GEORGE WEINER

PC ASIK33/00, ASIK31/7088, ASIK39/00, ASIP35/00, ASIP35/00, ASIP37/04,
                                                                                                                                                                                                                                                                                                                                                                Synthetic construct
SM synthetic construct
Characteries, artificial sequences.

I (Dases) artificial sequences.

I (Dases) artificial sequences.

Krieg,A.M. and Weiner,G.

Methods and products for stimulating the immune system using immuncherapeutic oligonucleotides and cytokines

L Datent: JP 2002510644-A 100 09-APR-2002;

UNIVERSITY OF 100AR RESEARCH FOUNDATION
OS Artificial Sequence
DN JP 2002510644-A/100
PN JP 2002510644-A/100
P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 17-JUL-2003
                                                                                                                                                                     PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BD261157 20 bp DNA linear PAT 17-JT Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines.
                                                                                                                                                                     BD261152 20 bp DNA linear PAT 17-JT Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ce 1..20
/organism='Artificial Sequence'
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 20; DB 6; Length 20; larity 100.0%; Pred. No. 18; Conservative 0; Mismatches 0; Indels

    .20
    forganism="synthetic construct"
/mol type="genomic DNA"
/db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                       BD261152.1 GI:33070922
JP 2002510644-A/100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD261157.1 GI:33070927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S:
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                        ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                      RESULT 12
BD261152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD261157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 17-JUL-2003
                                                                                        MOUTH A SECTION OF THE PROPERTY OF THE PROPERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-FEB-1999 US 60/121792
GUIDO GRANDI, RINO RAPPUOLI, MARZIA MONICA GIULIANI, MARIAGRAZIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGIK39/095, AGIK31/7088, AGIK39/39, AG1P31/04//C07K14/22, C12N15/09, C12N15/00
09, C12N15/00
oligonucleotide adjuvant
Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grandi, G., Rappuoli, R., Giuliani, M.M. and Pizza, M.
Enhancement of Neisseria antigen bactericidal activity using CG
motif-containing oligonucleotide
Patent: JP 2002537353-A 1 05-NOV-2002;
CHIRON SPA
OS Artificial Sequence
PN JP 2002537353-A/1
PD 05-NOV-2002
PP 09-PEB-2000 JP 2000600685
PR 26-PEB-1999 US 60/121792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   buzblz65
Enhancement of Neisseria antigen bactericidal activity using CG mocificontaining oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
Compositions of CPG and saponin adjuvants and uses thereof
Patent: JP 2002522510-A 2 23-JUL-2002;
AQUILA BIOPHARMACEUTICALS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism='Artificial Sequence'.
                                                                                                                                                                                                                                                                                                                                                                                                                               /organism='Quillaja saponaria'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%; Score 20; DB 6; Length 20; Best Local Similarity 100.0%; Pred. No. 18; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .20
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"

    20
    forganism="Quillaja saponaria"
|mol_type="genomic DNA"
|db_xref="taxon:32244"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 20; DB Best Local Similarity 100.0%; Pred. No. 18; Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 rccargacgrrccrgacgrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD251265.1 GI:33061035
JP 2002537353-A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD251265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SNAGRETESSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
BD251265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

δ

ö

Gaps

```
Search completed: May 4, 2006, 03:52:00 Job time: 464.368 secs
                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                       39,
CC
CC
FT
FT
                                                                                                                                               SE BE BE
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                             source
                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OS Artificial Sequence
PN JP 2005516294-A/86
PD 04-JUN-2002
PF 21-MAY-1999 JP 2000550515
PR 22-MAY-1999 US 60/086393
PI MICHAEL J MCCLUSKIE, HEATHER L DAVIS
PC A61K39/00, A61K9/10, A61P35/00, A61K9/51, A61K31/70, A61K39/ PC
39, A61P31/00, A61P35/00, A61P37/00
CC immunostimulatory synthetic oligonucleotide
FH Key Location/Qualifiers
FT source //organism='Artificial Sequence'.
                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                            PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
1 the sequences; artificial sequences.
1 the sequences; artificial sequences.
Mccluskie, M.J. and Davis, H.L.
Mccluskie, M.J. and Davis, H.L.
Mcthods and products for inducing mucosal immunity
Patent: JP 2002516294-A 86 04-JUN-2002;
LOEB HEALTH RESEARCH INSTITUTE AT THE OTTAWA HOSPITAL, CORY
                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                            ce 1. .20 /organism='Artificial Sequence'. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 20; DB 6; Length 20; llarity 100.0%; Pred. No. 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                        Query Match 100.0%; Score 20; DB 6; Length 20; Best Local Similarity 100.0%; Pred. No. 18; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD261311 20 bp DNA linear Methods and products for inducing mucosal immunity. BD261311 BD261311. GI:33071081 JP 2002516294-A/90.
                                                                                                                                                                                                                                                                                                                                                          BD261307 20 bp DNA linear Methods and products for inducing mucosal immunity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PHARMACEUTICALS GROUP INC
OS Artificial Sequence
PN JP 2002516294-A/86
D 04-JUN-2002
PF 21-MAY-1999 JP 2000550515
PR 22-MAY-1999 US 60/086393
PI MICHAEL J MCCLUSKIE, HEATHER L DAVIS

    .20
    /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"

                                                                             1. .20
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                        BD261307.1 GI:33071077
JP 2002516294-A/86.
 Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 20; Conserv
                                Bource
                                                                                                                                                                                                                                                                                                                                                                                        BD261307
SELL
                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                        RESULT 14
BD261307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD261311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                    A61K39/00, A61K9/10, A61K9/16, A61K9/50, A61K9/51, A61K31/70, A61K39/ PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                             other sequences; artificial sequences.

1 (bases 1 to 20)

McCluskie, J. and Davis, H.L.

Mcthods and products for inducing mucosal immunity

Patent: JP 2002516294—A 90 04-JUN-2002;

LOBB HEALTH RESEARCH INSTITUTE AT THE OTTAWA HOSPITAL, CORY

PHARMACEUTICALS GROUP INC

SATIFICIAL Sequence

PN JP 2002516294-A/90

04-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism='Artificial Sequence'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
100.0%; Score 20; DB 6; Length 20;
Best Local Similarity 100.0%; Pred. No. 18;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunostimulatory synthetic oligonucleotide
Key Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                     22-MAY-1998 US 60/086393
MICHAEL J MCCLUSKIE, HEATHER L DAVIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .20
/organism="synthetic construct"
/mol type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A61P31/00, A61P35/00, A61P37/00
                                                                                                                                                                                                                                                                                                                        21-MAY-1999 JP 2000550515
22-MAY-1998 US 60/08639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 rccargacerrccrgacerr 20
synthetic construct
synthetic construct
```

This Page Blank (uspto)

. `

```
PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                   BD261111 Methods a BD261156 Methods a BD261156 Methods a BD261272 Methods a BD26181 Vaccine.
BD267816 Methods f BD267876 Methods f BD270778 Stereoise CQ788114 Sequence CQ829541 Sequence CQ829541 Sequence CQ829548 Sequence CS080249 Sequence CS080249 Sequence CS080249 Sequence CS080249 Sequence CS11648 Sequence CS11648 Sequence CS11648 Sequence CS11648 Sequence CS11648 Sequence CS080714 Sequence CS080719 Sequence I96098 Sequence I96098 Sequence I96098 Sequence I96098 Sequence AR213851 Sequence AR213951 Sequence AR213951 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 29-SEP-1999
Methods a
Antisence
Enhanceme
Methods a
Methods a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 18; DB 6; Length 18; Best Local Similarity 100.0%; Pred. No. 3.2e+02; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Reed,J.C.
Regulation of bcl-2 gene expression
Patent: US 5831066-A 17 03-NOV-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18 bp Sequence 17 from patent US 5831066.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .18
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR052624 18 bp
Sequence 24 from patent US 5831066.
AR055624
AR052624.1 GI:5975988
                                                                                                                                                                                                                                                                                                                                                                                                                ALIGNMENTS
                                                  BD261156
BD261272
BD261272
BD267816
BD267916
BD267916
BD267917
CQ788210
CQ831283
CQ831283
CQ831283
CQ831283
CQ831283
CC8120648
CS081244
CS081244
CS081244
CS081244
CS081383
CS110648
CS110648
CS122219
AR212219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:5975983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
Unclassified.
1 (bases 1 to 18)
Reed,J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 18)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR052619.1
                                        0000000000000000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
                                                                    90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
AR052624
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
AR052619
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Combined
Ribonucle
High effi
REGULATIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
Use of nu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Compositi
Method of
Method of
Compositi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Microemul
                                                                                        4, 2006, 02:22:43; Search time 417.931 Seconds (without alignments) 2448.208 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR052619 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR052624 BAL16926 AR140496 AR140496 AR140347 SAR140534 BAL164748 BD006938 UBD0060525 BD190420 BD190420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD205569 N
BD205614 N
BD222609 C
                                                                                                                                                                                                                                                                                  11766282
          5.1.7
Biocceleration Ltd
                                                                                                                                                                                                                                                    5883141 segs, 28421725653 residues
                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
           GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                 nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD205569
BD205614
BD222609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR052624
AR116926
AR116493
AR146392
AR146392
AR16716
AR167148
BD069338
BD06493
BD106497
BD106497
BD190420
BD190420
                                                                                                                                                                                                           IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                1 tctcccagcgtgcgccat 18
                                                                                                                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                               US-10-789-758A-2
18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                       9b ba: *
9b in: *
9b on: *
9b on: *
9b ov: *
9b par: *
9b pr: *
9b pr: *
9b vi: *
9b vi: *
9b vi: *
9b vi: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                 Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic
                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                             Database
                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
```

```
PAT 08-AUG-2001
                                                    PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown...
Unknown...
Unclassified.
1 (bases 1 to 18)
1 (bases 1 to 18)
1 Krieg,A.M. and Weiner,G.
Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines
Patent: US 6218371-A 104 17-APR-2001;
Location/Qualifiers
                                                                                                                                                 Unclassified.

1 (bases 1 to 18)

Krieg,A.M. and Weiner,G.

Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines

Patent: US 6218371-A 59 17-APR-2001;

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 18; DB 6; Length 18; 100.0%; Pred. No. 3.2e+02; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                     ch 100.0%; Score 18; DB 6; Length 18; l Similarity 100.0%; Pred. No. 3.2e+02; 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18 bp DN
Seguence 104 from patent US 6218371.
AR146392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR154716 18 bp I
Sequence 45 from patent US 6239116.
AR154716
                                              Sequence 59 from patent US 6218371.
AR146347
                                                                                                                                                                                                                                                    1. .18
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                               1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:15122769
                                                                                             AR146347.1 GI:15109536
                                                                                                                                                                                                                                                                                                                                                                              1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR146392.1 GI:15109581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
Unclassified.
1 (bases 1 to 18)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 18; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR154716.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                        Unknown
                                                                                                                                         Unknown
                                                                                                          KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                        RESULT 5
AR146347
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
AR146392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR154716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 16-JUN-2001
                                                                                                                                                                                                                                                                   PAT 16-MAY-2001
                                                                                                                                                                                                                                                                                                                                               Unknown.
Unknown.
Unclassified.
I (bases 1 to 18)
Brown,L.R. and Xu,C.
Fluorescent dibenzazole derivatives and methods related thereto
Patent: US 6140051-A 1 31-OCT-2000;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
Unknown.
Unclassified.
I (bases I to 18)
Xrieg,A.M.; Klinman,D. and Steinberg,A.D.
Immunostimulatory nucleic acid molecules
Patent: US 6207646-A 55 27-MAR-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 18; DB 6; Length 18; 100.0%; Pred. No. 3.2e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%; Score 18; DB 6; Length 18; Best Local Similarity 100.0%; Pred. No. 3.2e+02; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                             Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                    linear
                                                                                                                                         0; Indels
                                                                                                            100.0%; Score 18; DB 6; I 100.0%; Pred. No. 3.2e+02; iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 55 from patent US 6207646.
AR140496
AR140496.1 GI:14482992
Regulation of bcl-2 gene expression
Patent: US 5831066-A 24 03-NOV-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .18
/organism="unknown"
/wol_type="unassigned DNA"
                                                      /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                   AR116926 18 bp 18 bp AR116926 1 from patent US 6140051. AR116926 AR116926.1 GI:14097832
                                                                                                                                                                  1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCTCCCAGCGTGCGCAT 18
                                                                                                                                                                                               1 rereceasesiasesen 18
                                                                                                             Query Match
Best Local Similarity 100.0
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.(
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR140496
                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bource
                                             Bource
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR140496
LOCUS
                                                                                                                                                                                                                                       RESULT 3
AR116926
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                       ઠ
```

ö

Gaps

ö

PAT 27-AUG-2002

```
BDU80525 18 bp RNA linear PAT 27-AUG-2002 Ribonucleoside-derivative and method for preparing the same. BD080525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OS Artificial Sequence
PN JP 2001519170-A/45
PD 23-OCT-2001
PP 28-ESEP-1999 JP 2000515030
PR 02-CCT-1997 US 60/060673,18-AUG-1998 US 09/136
TIMOTHY A RILEY, BOB D BROWN, LYLE J ARNOLD
PC C12Q1/68, C07H21/04, C12N15/09, C12P19/34, C12N15/00 CC
                                                  'organism='Artificial Sequence'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ce 1. .18 /organism='Artificial Sequence'
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 18; DB 6; Length 18; Best Local Similarity 100.0%; Pred. No. 3.2e+02; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                               Length 18;
                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                               100.0%; Score 18; DB 6; 1 100.0%; Pred. No. 3.2e+02;
                     Location/Qualifiers

    18
        /organism="synthetic construct"
/mol type="genomic DNA"
/db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers

    18
    synthetic construct"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                       other sequences, artificial sequences.

1 (bases 1 to 18)
Riley, T.A., Brown, B.D. and Arnold, L.J.
Combined antisense library
Patent: JP 2001519170-A 45 23-OCT-2001;
OASIS BIOSCIENCES INC
                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other sequences; artificial sequences.
1 (bases 1 to 18)
                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                              18 bp
     synthetic oligonucleotide
                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                           18
Combined antisense library.
BD076451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      synthetic oligonucleotide
FH Key Locat
FT source 1. .1
                                                                                                                                                                                                                                               1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                            BD076451.1 GI:22622054
JP 2001519170-A/45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD080525.1 GI:22626128
JP 2001515087-A/4.
                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 synthetic construct
synthetic construct
                                                                                                                                                                            Query Match
Best Local Similarity 100.0
Matches 18; Conservative
                                   source
     당품분분
                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
BD080525/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                           RESULT 10
BD076451
                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    쉼
                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                             PAT 17-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD069938 17-AUG-20
Use of nucleic acids containing unmethylated CPG dinucleotide in
the treatment of LPS-associated disorders.
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 18)
Semple, S.C., Klimuk, S.K., Harasym, T., Hope, M.J., Ansell, S.M., Cullis, P., Scherrer, P. and Debeyer, D.
Charged therapeutic agents encapsulated in lipid particles containing four lipid components
Patent: US 6287591-A 14 11-SEP-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                            ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ch 100.0%; Score 18; DB 6; Length 18; 1 Similarity 100.0%; Pred. No. 3.2e+02; 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                               Length 18;
                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                           Query Match
100.0%; Score 18; DB 6; Length 16
Best Local Similarity 100.0%; Pred. No. 3.2e+02;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Artificial Sequence
JP 2001513776-A/27
04-SEP-2001
25-FEB-1999 JP 1998537810
28-FEB-1997 US 60/039405
DAVID A SCHWARTZ,ARTHUR M KRIEG
A61K49/00,C07H21/02,C07H21/04,A01N43/04
Krieg, A.M. and Kline, J.N.
Immunostimulatory nucleic acid molecules
Patent: US 629116-A 45 29-WAY-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 synthetic construct
synthetic construct
other sequences; artificial sequences.
1 (bases 1 to 18)

    .18
    /organism="unknown"
    /mol_type="unassigned DNA"

                                                                                                                                                                                                                                                                                                                        AR167448 18 bp I
Seguence 14 from patent US 6287591.
AR167448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .18
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                        1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD069938.1 GI:22615541 JP 2001513776-A/27.
                                                                                                                                                                                                                                                                                                                                                                        AR167448.1 GI:17903228
                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                 Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
BD069938
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bource
                              JOURNAL
FEATURES
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                       RESULT 8
AR167448
                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                            ð
```

09/136080 PI

ö

Gaps

ö

```
Synthetic construct
SM synthetic construct
construct
conternet artificial sequences.

I (bases 1 to 18)

Barackman, J., Simph M., Ugozoli, M., Kazazu, J., Donnelly, J.,
Ott, G.S. and Ohagan, D.
Microemulations with Adsorbed Macromoelecules and Microparticles
Microemulations with Adsorbed Macromoelecules and Microparticles
Chiron Corporation
OS Artificial Sequence
N JP 2002531102-A/4
DD 05-NOV-2002
PP 09-FBB-2000 UP 2000600618
PR 29-JUL-1999 US 60/146391, 28-OCT-1999 US 60/161997, PR
26-FBB-1999 US 60/121858
PI john barackman, manmohan simph, mildred ugozoli, jina kazazu, john
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ohn barackman, manmohan simph, mildred ugozoli, jina kazazu, john
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD190420 18 bp DNA linear PAT 17-JUL-2003 Microemulgions with Adsorbed Macromoelecules and Microparticles. BD190420
                                                                     PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description of Artificial Sequence: Designed DNA based on bcl-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                          linear
                                                                                                                                                                                                                                                                                                           REGULATION OF bc1-2 GENE EXPRESSION Patent: JP 2003026609-A 17 29-JAN-2003; John C REGIA Sequence DN Artificial Sequence PN JP 2003026609-A/17 PD 29-JAN-2003 JP 20-JAN-2002 JP 2002178753 PR 20-SEP-1993 US 08/124256 PI john c reed CC Description of Artificial Sequence: CC CC CC 2 gene Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 18; DB 6; I
100.0%; Pred. No. 3.2e+02;
ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="synthetic construct"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers

    . 18
        /organism="synthetic construct"
|mol type="genomic DNN"
|db_xref="taxon:32630"

                                                                            ONA
                                                                                                                                                                                       synthetic construct
synthetic construct
other sequences; artificial sequences.
1 (bases 1 to 18)
                                                                          BD187532 18 bp DN
REGULATION OF bcl-2 GENE EXPRESSION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gary s ott,derek ohagan
Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD190420.1 GI:33000159
JP 2002537102-A/4.
                                                                                                                                          BD187532.1 GI:32997271
JP 2003026609-A/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                               Reed, J.C.
                                                                                                                           BD187532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RCPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                RESULT 13
BD187532
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
BD190420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 18-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
Pitsch, S., Weiss, P.A. and Jenny, L.
Ribonucleoside-derivative and method for preparing the same
Patent: JP 201515087-A 4 18-SEP-2001;
STEFAN PITSCH, PATRICK A WEISS, LUZI JENNY
OS Artificial Sequence
PN JP 20101515087-A/4
PD 18-SEP-2001
PF 17-AUG-1998 JP 2000509723
PR 18-AUG-1999 GP 2000509723
PR 18-AUG-1997 CH 1931/97
PR 19-AUG-1997 CH 1931/97
PR 19-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 buluosty/
High efficiency encapsulation of charged therapeutic agents in a libid vesicles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0%; Pred. No. 3.2e+02;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                            /organism='Artificial Sequence'
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
100.0%; Score 18; DB 6; Length 18;
Best Local Similarity 100.0%; Pred. No. 3.2e+02;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                1.18
/organism="synthetic construct"
/mol_typo="genomic RNA"
/db_xref="taxon:32630"

    .18
    /organism="Chlamydia sp./mol_type="genomic DNA"
    /db_xref="taxon:35827"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 rereceasesracion 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD106497.1 GI:23201315
JP 2002501511-A/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18 TCTCCCAGCGTGCGCCAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD106497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
BD106497
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
              AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
```

Gaps

```
synthetic construct
SM synthetic construct
construct
Chases artificial sequences.

I (bases 1 to 18)
Teng, C.L. and Hardee, G.
Compositions and methods for the delivery of oligonucleotides via the alimentary canal
ISIS PHARMACEUTICALS INC
OS Artificial Sequence
NN JP 2002510319-A34
PD 02-APR-2002
PP 01-JUL-1999 JP 1999507295
PR 01-JUL-1997 US 08/886629
PR CHING LEOU TENG, GREG HARDEE
PC CLOSALIALIST, AGIRK9/127, AGIRK9/127, AGIRK9/00, CO7H21/04
CC Description of Artificial Sequence: Novel Sequence FH Key
Location/Qualifiers
                                                                                                                                                                                                                                        BD192469

Compositions and methods for the delivery of oligonucleotides via the alimentary canal.

BD192469.1 GI:33002208

JP 2002510319-A/34.
                                                                                       ö
                                                                                       Gaps
                                                                                       ..
                                                 Query Match
100.0%; Score 18; DB 6; Length 18;
Best Local Similarity 100.0%; Pred. No. 3.2e+02;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .18
/organism="synthetic construct"
/mol type="genomic DNA"
/db_xref="taxon:32630"
/db_xref="taxon:32630"
                                                                                                                  RESULT 15
BD192469
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                   g
                                                                                                                      ઠે
```

셤

δ

ö

0; Gaps

Query Match
100.0%; Score 18; DB 6; Length 18;
Best Local Similarity 100.0%; Pred. No. 3.2e+02;
Matches 18; Conservative 0; Mismatches 0; Indels

Search completed: May 4, 2006, 03:51:58 Job time: 422.931 secs

This Page Blank (uspto)

Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Minimum DB Maximum DB

Database

```
CZ719721 OC Ba004
BG286153 602383365
BG182783 RST1660 A
AW070294 xa06911.x
AI005163 oul3c07.x
CR747281 CR747281
BX104748 BX104748
        BI163707 RE03175.5
BI355588 RE42769.5
BI63786 SD19973.5
AI514786 LD46473.5
BI482233 RE64891.5
AI52135 LD44124.5
BI577144 RE70787.5
BI577144 RE70787.5
BI577144 RE70787.5
BI577144 RE70787.5
BI577144 RE70787.5
BI580210 RE6212.5
BI483280 RE66122.5
BI580210 RE74359.5
AA990787 LD34664.5
BX094259 CZ719721 OC_BA004
                                                                                                                                                                                                                                                                                                                                                                  GSS 17-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini, Hominidae, Homo.

1 (bases 1 to 720)
Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Todd, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (16-NOV-2003) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Clark, A.G., Glanowski, S., Nielson, R., Thomas, P., Kejariwal, A., Toda, M.A., Tanenbaum, D.M., Civello, D.R., Lu, F., Murphy, B., Ferriera, S., Wang, G., Zheng, X.H., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                  AY416379 720 bp DNA linear GSS 17-DF
Homo sapiens BCL2 gene, VIRTUAL TRANSCRIPT, partial sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 720;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 18; DB 10; Best Local Similarity 100.0%; Pred. No. 3.3e+02; Matches 18; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Science 302 (5652), 1960-1963 (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
1. 720
/ Organism="Homo sapiens"
/ mol_type="genomic DNA"
/ db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                                                                                       AA990787
BX094259
CZ719721
                                  B1637858
A1514786
B1482233
A1512315
B1577144
                                                                                                      AI108632
BI485852
BI483280
BI580210
                                                                                                                                                                                          BG286153
BG182783
AW070294
AI005163
CR747281
BX104748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="BCL2"
/locus_tag="HCM5871"
                                                                                                                                                                                                                                                                    BU677370
                                                                                                                                                                                                                                                                                                                                                                                           genomic survey sequence
                                                                                                                                                                                                                                                                                                                                                                                                                AY416379.1 GI:39772339
                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
Homo sapiens
gene trios
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14671302
 AY416379/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
 0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ422178 AGENCOURT
BQ659398 AGENCOURT
BQ056709 AGENCOURT
BQ061155 AGENCOURT
BQ061155 AGENCOURT
BQ642891 AGENCOURT
BQ65417 AGENCOURT
BQ055296 AGENCOURT
BQ055296 AGENCOURT
CQ314459 EK236647.
HB5916 y89507.r1
HB5916 y89507.r1
HB3468 y691b09.r1
AA402089 zu536647.
HB3468 y691b09.r1
AA402089 zu536647.
HB3468 y691b09.r1
AB31101 RE57807.5
BI311010 RE57807.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AY416379 Homo Bapi
BG258362 602380147
CC465553 ZMMBBC038
BQ641946 AGENCOURT
                                                                              4, 2006, 02:45:02 ; Search time 1275.83 Seconds (without alignments) 660.095 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                             82156650
           5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                    41078325 segs, 23393541228 residues
                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
           GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                      Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                         nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H85916
H83468
AA402089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AY416379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CC465553
BQ641946
BQ422178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ643236
BQ059398
BQ056709
BQ061355
BQ061909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ054417
BQ055296
BQ055950
CO314459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BI371010
BI214814
BI212997
                                                                                                                                                                              IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                        1 tctcccagcgtgcgccat 18
                                                                                                                                                                                                                                                                    length: 0
length: 2000000000
                                                                                                                          US-10-789-758A-2
18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             %
Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                 90 est1:*
90 est2:*
90 est4:*
90 est4:*
90 est5:*
90 est7:*
90 est7:*
90 gs83:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                980
1008
1036
1051
1054
1078
1126
376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                387
398
412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   442
450
478
491
                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1000.00
                                                                                                                                                                                                                                                                                                                                                        BST:
                                                                                 May
                                                                                                                                                                                                                                                                                                         Post-processing:
                                                                                                                                                                                                                                                                     seq
```

ö

Score

Result

000000000000

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS TITLE JOURNAL COMMENT

LOCUS

BG258362/c

RESULT 2

d ò

```
BQ641946 919 bp mRNA linear BST 15-JUL-2002 AGENCOURT 8289686 NIH_MGC_99 Homo sapiens cDNA clone IMAGE:6304926 BQ641946
                                                                                                                             Contact: Bharti, A.K.
Dr.Joachim Messing's lab
The Plant Genome Initiative at Rutgers, Waksman Institute, Rutgers
The Plant Genome Initiative at Rutgers, Waksman Institute, Rutgers
University
190 Frelinghuysen Road, Piscataway, NJ 08854, USA
Tel: 732 445 3801
Exa: 732 445 5305
Email: bharti@waksman.rutgers.edu
Seq primer: T7
Class: BAC ends
High quality sequence start: 425.
High quality sequence start: 425.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hominidae; Homo.

Is I (bases 1 to 919)

S NIH-MGC http://mgc.nci.nih.gov/.

In Tasional Institutes of Health, Mammalian Gene Collection (MGC)

In Opublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
Tissue Procurement: Lou Staudt

CDNA Library Preparation: Rubin Laboratory

CON A CONSTITUTE CONSTITUTE

CONSTITUTE ACTUAL CONSTITUTE

Found through the I.M. A.G. E. Consortium/Link at:

http://image.llnl.gov

Plate: LLCW255 row: g column: 07

High quality Sequence Stop: 582.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:4577"
/clone="zMMBBc0387J18"
/lab_host="E.coli DH108"
/clone lib="zMMBG"
/note="Vector: pTARBAC1.3; Site_1: BamHI; Site_2: BamHI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Bharti, A.K., Young, S., Kavchok, S., Keizer, G., Bronzino, A.C., Rouzard, K., Puke, G., Yu, Y., Wing, R. and Messing, J. Sequencing of the maize genome at PGIR (2003b) Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 18; DB 9; Length 741; 100.0%; Pred. No. 3.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mol type="mcNa,"
db xref="taxon:9606"
/clone="IMAGE:6304926"
/isb bost="WH10B (phage-resistant)"
/clone_lib="NIH_MGC_99"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.0%; Pred. No. 3.3.3
Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="genomic DNA"
/cultivar="B73"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Zea mays"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              460 TCTCCCAGCGTGCGCCAT 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ641946.1 GI:21766118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
BQ641946/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC465553 741 bp DNA linear GSS 04-JUN-2003 ZMMBBc0387J18f ZMMBBc Zea mays genomic clone ZMMBBc0387J18 5',
                                                                                                                                                                                                                                                                                 BG258362 13-FEB-2001 737 bp mRNA linear EST 13-FEB-2001 602380147F1 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:4511027 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zea mays

Zea mays

Edwaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD

Lade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae; Homo.

Is (bases 1 to 737)

Is NIH-MGC http://mgc.nci.nih.gov/.

In Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov

Tissue Procurement: ATC

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: Incyte Genomics, Inc.

CDNA Library Mrayed by: Incyte Genomics, Inc.

CDNA Library Arrayed by: Locyte Genomics, Inc.

CDNA Library Arrayed by: Incyte Genomics, Inc.

CDNA Library Arrayed by: Inc.

CDNA Libraryed by: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 18; DB 2; Length 737; 100.0%; Pred. No. 3.3e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rcrcccAccarcccar 389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genomic survey sequence.
CC465553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CC465553.1 GI:31383142
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTCCCAGCGTGCGCCAT 18
                                              1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                          BG258362.1 GI:12768277
                                                                                      18 TCTCCCAGCGTGCGCCAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.0
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1, .737
                                                                                                                                                                                                                                                                                                                                                            mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                         BG258362
```

FEATURES

RESULT 3 CC465553/c LOCUS

ઠે

ORIGIN

DEFINITION

ACCESSION

VERSION KEYWORDS

ORGANISM

REFERENCE

ö

Gaps

ઠે ద

```
/tissue type="lymphoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone lib="MIH_MGC 99"
/clone lib="MIH_MGC 99"
/note="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2:
RocRI; cDNA made by voligo-dT priming. Directionally cloned
into EcoRI/XhoI sites using the following 5' adaptor:
GGCAGAG(G): Size-selected >500bp for average insert size
I.8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
II.RT Life Technologies). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  960 bp mRNA linear EST 29-MAR-2002
AGENCOURT_7049763 NIH_MGC_99 Homo sapiens cDNA clone IMAGE:5815441
BQ059398
                                     AGENCOURT 8288937 NIH_MGC_99 Homo sapiens cDNA clone IMAGE:6303439 BQ643236
                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tisaue Procurement: Lou Standin Laboratory
cDNA Library Preparation: Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC. clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://inage.llnl.gov
Plate: LLCM2522 row: i column: 08
High quality sequence stop: 594.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 960)

NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                      Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euterchontoglires; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 954)

11 (bases 1 to 954)

Nath-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 18; DB 5; Length 954; 100.0%; Pred. No. 3.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .954
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6303439"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.08; PL.
100.08; PL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      511 TCTCCCAGCGTGCGCCAT 494
                                                                                                                                                                    BQ643236.1 GI:21767408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ059398.1 GI:19818738
                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Library.
                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
BQ059398/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
ORGANISM
                                          BQ643236/c
                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organiam="Homo sapiens"
/mol_type="mRNA"
/mol_type="mRNA"
/doce="mRNA"
/doce="mRNGE:6014407"
/tissue_type="embryonal carcinoma, cell line"
/lab.hoste="bH10B (phage-resistant)"
/clone_lib="NHH MGC 92"
/note="organ: testis; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally; oligo-dT primed.
Average insert size_25 kb. Library enriched for full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
/note="Organ: lymph; Vector: pOTB7; Site_1: Xho1; Site_2: EcoR1; cDNA made by oligo-dr priming. Directionally cloned into EcoR1/Xho1 sites using the following 5' adaptor: GGCACGAG(G). Size-selected >SOODp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript Li RT (Life Technologies). Note: this is a NH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGENCOURT 7827267 NIH_MGC_92 homo sapiens cDNA clone IMAGE:6014407 5', mRNA sequence. BQ422178 BQ422178 1 GI:21117493 EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hominidae; Homos Bartonoucyllies; Filmates; Carallilli; Hominidae; Homos Bartonoucyllies; Filmates; Carallilli; Bases I to 924)

NIH-MGC http://mgc.nci.nih.gov/.

NIH-MGC http://mgc.nci.nih.gov/.

Umpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
Tissue Procurement: ATC

CONA Library Preparation: Life Technologies, Inc.

CDNA Library Procurement: ATC

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Colone distribution information can be found through for Inc.

Flate: LimMillogo row: n column: 08

High quality Sequence Stop: 524.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 924;
                                                                                                                                                                                                                                                                                              Length 919;
                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 18; DB 5; Le
100.0%; Pred. No. 3.4e+02;
Mismatches 0;
                                                                                                                                                                                                                                                                                           ch 100.0%; Score 18; DB 5; I
1 Similarity 100.0%; Pred. No. 3.4e+02;
18; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                        236 TCTCCCAGCGTGCCCAT 219
                                                                                                                                                                                                                                                                                                                                                                                                1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
BQ422178/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEATURES
                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
```

ö

ઠે 셤 Gaps

```
/tissue type="lymphoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone lib="NH10B (phage-resistant)"
/clone lib="NH1 MGC 99"
/note="Organ: lymph7 Vector: pOTB7; Site_1: XhoI; Site_2:
BCORI; cDNA made by oligo-dr priming. Directionally cloned
into EcoRI/AnoI sites using the following 5' adaptor:
GGCACGAG(G). Size-selected >500bp for average insert size
I.8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
II RT (Life Technologies). Note: this is a NIH_MGC
             /clone=IMAGES:5809129"
/tissue_type="lymphoma, cell line"
/tissue_type="lymphoma, cell line"
/lab_hofe="blue" Bhage-resistant)"
/clone lib="NHH MGC 99"
/clone lib="NHH MGC 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1008 bp mRNA linear EST 02-APR-2002
AGENCOURT 6859552 NIH_MGC_99 Homo sapiens CDNA clone IMAGE:5920789
BQ061355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hominidae; Homo.

I (bases I to 1008)

NIH-MGC http://mgc.nci.nih.gov/.

NIH-MGC http://mgc.nci.nih.gov/.

L Onpublished (1999)

Contect: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
Tissue Procurement: Lou Staudt
cDNA Library Preparation: Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLOM2085 row: a column: 14
High quality sequence stop: 573.
High quality sequence stop: 573.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 18; DB 3; Length 980; 100.0%; Pred. No. 3.4e+02; Aisharches 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5920789"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  511 TCTCCCAGCGTGCGCCAT 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ061355.1 GI:19885327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                        Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 9
BQ061355/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Extractor, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homindae; Homo.

1 (Dases 1 to 980)

2 NIH-MGC http://mgc.nci.nih.gov/.

3 NIH-MGC http://mgc.nci.nih.gov/.

3 NIH-MGC http://mgc.nci.nih.gov/.

4 Unpublished (1999)

5 Contact: Robert Strausberg, Ph.D.

6 Email: cgapbs-remail.nih.gov

7 Tissue Procurement: Lou Staudt

7 CDNA Library Preparation: Rubin Laboratory

6 CDNA Library Preparation: Rubin Laboratory

7 CDNA Library Preparation: Rubin Laboratory

8 Sequencing by: Agencourt Bioscience Corporation

7 Clone distribution: MGC Clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

8 High quality sequence stop: 697.

8 High quality sequence stop: 697.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGENCOURT 6940428 NIH MGC 99 Homo Bapiens CDNA clone IMAGE:5809129 5', mRNA Sequence.
                        Contact: Robert Strausberg, Ph.D.
Email: cgapbe.remail.nih.gov
Tissue Procurement: Lou Strauth Laboratory
Tissue Procurement: Lou Strauth Laboratory
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bisceience Corporation
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM2070 row: I column: 02
High quality sequence stop: 683.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 18; DB 3; Length 960; 100.0%; Pred. No. 3.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   511 TCTCCCAGCGTGCCAT 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ056709.1 GI:19816049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 100.0
Matches 18, Conservative
Inpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                           1. .960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
BQ056709/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
```

```
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18; Conservative
                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
BQ054417/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /dione="Involution"
//dione="Involution"
//issue_type="lymphoma, cell line"
//issue_type="lymphoma, cell line"
//isb host="DHJOB (phage-resistant)"
//clone_lib="NHH MGC 99"
//octe="Organ: lymph; Vector: pOTB7; Site_1: XhoI; Site_2:
ECORI; cDNA made by oligo-dT priming. Directionally cloned
into EcoRI/AnoI sites using the following 5: adaptor:
GGCACGAG[G]. Size-selected >500bp for average insert size
1.8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
II RT (Life Technologies). Note: this is a NIH_MGC
Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGENCOURT 8285835 NIH_MGC_99 Homo sapiens cDNA clone IMAGE:6292709 5', mRNA sequence. BQ642891
BQ642891.1 GI:21767063
                                         ö
                                                                                                                                                                                                       BQ061909 1036 bp mRNA linear EST 02-APR-2002 AGENCOURT_6854719 NIH_MGC_99 Homo sapiens cDNA clone IMAGE:5921412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                         Hominidae; Homo.

I (bases I to 1036)

NIH-MGC http://mgc.nci.nih.gov/.

NIH-MGC http://mgc.nci.nih.gov/.

L Uppublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
Tissue Procurement: Lou Staudt
cDNA Library Preparation: Mel J. M. G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be found through the I.M. A.G.E. Consortium/LLNL)
Http://image.llnl.gov
Plate: LLCM2086 row: k column: 13
High quality sequence stop: 595.
                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Euarchontoglires, Primates, Catarrhini,
                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
 Length 1008;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1036;
                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 18; DB 3; Le
100.0%; Pred. No. 3.4e+02;
ative 0; Mismatches 0;
Score 18; DB 3; I
Pred. No. 3.4e+02;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                       ö
                                                                                                           511 rérécéadégrécécear 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   511 TCTCCCAGCGTGCGCCAT 494
                                                                          18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                 BQ061909.1 GI:19887364
Query Match
Best Local Similarity 100.0%;
Matches 18; Conservative 0
                                                                          1 TCTCCCAGCGTGCGCCAT
                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                        , mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .. .1036
                                                                                                                                                                                                                                                                BQ061909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                  RESULT 10
BQ061909/c
                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
BQ642891/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

```
SOURCE

Homo septems (human)

SOURCE

Homo septems (human)

REFERENCE

Homos spetems (human)

Remailed Subhaets (human)

Homos spetems (human)

Homos spetems (human)

Homos spetems (human)

Remailed Subhaets (human)

Location (human)

Remailed Subhaets (human)

Location (human)

Remailed Subhaets (human)

Remailed Subhaets (human)

Location (human)

Remailed Subhaets (human)

Reference

Reference
```

```
511 TCTCCCAGCGTGCGCCAT 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                         Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                  RESULT 14
BQ055950/c
                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                               셤
                                                                                                                      /mol type="mRNA"
/db xref="taxon:9606"
/db xref="taxon:9606"
/clone="IMAGE:80045!"
/tissue type="lymphoma, cell line"
/lab host="DH10B (phage-resistant)"
/clone lib="NIH MGC 99"
/note="Organ: lymph; Vector: pOTB7; Site 1: Xho1; Site 2:
EcoR1; cDNA made by oligo-dT priming. Directionally cloned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQU55296 1078 bp mRNA linear EST 29-MAR-2002
AGENCOURT_6797188 NIH_MGC_99 Homo sapiens cDNA clone IMAGE:5807451
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapber-r@mail.nih.gov
Tissue Procurement: Lou Staudt
CDNA Library Preparation: Rubin Laboratory
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.B. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM2049 row: o column: 04
High quality sequence stop: 604.
Location/Qualifers
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Euarchontoglires, Primates, Catarrhini, Hominidae, Homo.

1. (Dases 1 to 1078)

Nathonal Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLCM2040 row: a column: 24
High quality sequence stop: 589.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ..
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.0%; Pred. No. 3.4e+02;
Matches 18; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               511 rereceasesrees 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BQ055296
BQ055296.1 GI:19814636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
Homo sapiens
                                                                                                               . .1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BQ055296/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
```

셤

```
/tissue_type="lymphoma, cell line"
/tissue_type="lymphoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone lib="NIH MGC 99"
/clone lib="NIH MGC 99"
/note="Organ: lymph, Vector: pOTB7; Site_l: XhoI; Site_2:
BCORI, cDNA made by oligo-dT priming. Directionally cloned
into EcoRI/XhoI sites using the following 5' adaptor:
GGCACGAG(G). Size-selected >500bp for average insert size
I. 8kb. Library constructed by Ling Hong in the laboratory
of Gerald M. Rubin (University of California, Berkeley)
using ZAP-cDNA synthesis kit (Stratagene) and Superscript
II RT (Life Technologies). Note: this is a NIH_MGC
Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGENCOURT 6796149 NIH_MGC_99 Homo sapiens cDNA clone IMAGE:5808196 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                      ö
into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Size-selected >500bp for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-CDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NIH-MGC http://mgc.nci.nih.gov/.

NIH-MGC http://mgc.nci.nih.gov/.

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs.r@mail.nih.gov

Tissue Procurement: Lou Staudt

CDNA Library Preparation: Rubin Laboratory

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://inage.llnl.gov

Plate: LLCM2051 row: n column: 05

High quality sequence stop: 585.

High quality sequence stop: 585.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                         .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 18; DB 3; Length 1126; 100.0%; Pred. No. 3.4e+02; ive 0; Mismatches 0; Indels C
                                                                                                                                                                                                                                                                                                     100.0%; Score 18; DB 3; Length 1078; 100.0%; Pred. No. 3.4e+02; tive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .1126
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5808196"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   511 TCTCCCAGCGTGCGCCAT 494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BQ055950.1 GI:19815277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                            18; Conservative
                                                                                                                                                                                                                Library.
```

```
CO314459 376 bp mRNA linear EST 28-JUN-2004 EK236547.5prime Exelixis FlyTag CK01 pcDNA-SK+ Drosophila melanogaster cDNA clone EK236547 5, mRNA sequence. CO314459.1 GI:49371834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Drosophila melanogaster"
/mol_type="mRNA"
/db_xref="taxon:7227"
/clone="EK23647"
/clone="EK23647"
/clone="Exclixis FlyTag CK01 pCDNA-SK+"
/clone="Dryan: mixed stage embryos, imaginal disks, and adult heads; Vector: pCDNA-SK+; Site_1: NotI; Site_2:
XhoI; Random primed, normalized library from mixed stage embryos, imaginal disks, and adult heads."
                                                                                                                                                                                       Drosophila melanogaster (fruit fly)
Drosophila melanogaster
Eukaryotea; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Bukaryotea; Endopteryota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.

Ephydroidea; Drosophilidae; Drosophila.

Kopczynski, C., Platt, D., Campbell, J., Muzong, C., Laufer, A., Peterson, E. and Swimmer, C.
Exelixis Flyfag EST Project CK01 Library
Contact: Stapleton, M.
BDGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Described Berkeley National Lab
One Cyclotron Rd, Berkeley, CA 94720, USA
Fax: 510 486 6798
Email: http://www.fruitfly.org/EST, est@fruitfly.berkeley.edu
Plate: EX.2365 row: D column: 11
High quality sequence stop: 301.
1.05cation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
91.1%; Score 16.4; DB 7; Length 376;
Best Local Similarity 94.4%; Pred. No. 2e+03;
Matches 17; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTCCCAGCGTGCGCCAT 18
                                              LOCUS
                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
COMMENT
RESULT 15
CO314459
                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

Search completed: May 4, 2006, 07:17:40 Job time : 1280.83 secs

132 TCGCCCAGCGTGCGCCAT 149

셤

This Page Blank (uspto)

```
us-us-vbu-sub-ce, Application US/09760506
; Publication No. US2001003433041
; Sequence 2, Application US/09760506
; Publication No. US2001003433041
; GENREAL INFORMATION:
; APPLICANT: Kensil, Charlotte
; TITLE OF INVENTION: Saponin and Methods Thereof
; CURRENT FILING DATE: 2002-01-12
; PRIOR APPLICATION NUMBER: 60/105,840
; PRIOR APPLICATION NUMBER: 60/125,840
; PRIOR PILING DATE: 1999-04-08
; PRIOR FILING DATE: 1999-04-08
; PRIOR PLING DATE: 1998-08-10
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: Patentin version 3.0
; SEQ ID NO 2
; SEQ ID NO 2
; ENGTHANCE: PATENTIN VERSION 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                       Appl
Appli
                                                                                                                                                                                                                                                             Sequence 112, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                              Sequence Sequence S
                                       Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                            Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                       Sequence
                  Sequence
                                                                                                    Sequence
                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE: OTHER INFORMATION: Description of Artificial Sequence: Motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 59, Application US/09824468
; Patent No. US20020064515A1
; GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
; APPLICANT: Weiner, George
; TITLE OF INVENTION: Methods and Products for Stimulating the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 18; DB 3; Length 18; 100.0%; Pred. No. 57; ive 0; Mismatches 0; Indels
US-09-776-479-1

US-09-776-479-54

US-09-776-479-95

US-09-776-479-91

US-10-102-653-1

US-10-112-653-85

US-10-112-653-85

US-10-017-995-54

US-10-017-995-54

US-10-017-995-55

US-10-017-995-53

US-10-017-995-53

US-10-142-566-45

US-10-290-545-24

US-10-290-545-24

US-10-262-318-6

US-10-224-523-40

US-10-224-523-40
                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCTCCCAGCGTGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18; Conservative
     Best Local Similarity
Matches 18; Conserv
                                                  1000.0
1000.0
1000.0
1000.0
1000.0
                                                                                                                                                                        100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
US-09-824-468-59
                                                                                                                                                                                                                                                                                                                                                   US-09-760-506-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-760-506-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGIH: 18
     Query Match
     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Appli
Sequence 77, Appl
Sequence 98, Appl
Sequence 99, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 14, Appl
Sequence 4, Appli
                                                                                 4, 2006, 07:24:16 ; Search time 268.966 Seconds (without alignments) 553.412 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 104,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20,
Sequence 55,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                           Published Applications NA Main:*

1: /cgn2_6/ptodata/1/pubpna/USO3_PUBCOMB.seq:*

2: /cgn2_6/ptodata/1/pubpna/USO3_PUBCOMB.seq:*

3: /cgn2_6/ptodata/1/pubpna/USO3B_PUBCOMB.seq:*

4: /cgn2_6/ptodata/1/pubpna/USO3B_PUBCOMB.seq:*

5: /cgn2_6/ptodata/1/pubpna/USO3B_PUBCOMB.seq:*

6: /cgn2_6/ptodata/1/pubpna/USO3D_PUBCOMB.seq:*

7: /cgn2_6/ptodata/1/pubpna/USO3D_PUBCOMB.seq:*

8: /cgn2_6/ptodata/1/pubpna/USO3D_PUBCOMB.seq:*

9: /cgn2_6/ptodata/1/pubpna/USO3D_PUBCOMB.seq:*

9: /cgn2_6/ptodata/1/pubpna/USO3D_PUBCOMB.seq:*

10: /cgn2_6/ptodata/1/pubpna/USO3D_PUBCOMB.seq:*
                                                                                                                                                                                                                                                   19587084
               GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-024-468-104
US-09-965-116A-7
US-09-965-116A-7
US-09-965-116A-99
US-09-965-116A-99
US-09-965-116A-99
US-09-965-116A-99
US-09-985-116A-99
US-09-815-371-21
US-09-815-371-21
US-09-818-326-755
US-09-911-732-20
US-09-9118-918-55
US-09-776-479-1
US-09-776-479-55
US-09-776-479-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-954-987B-115
US-09-895-480A-14
                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                         9793542 segs, 4134689005 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-895-480A-1
US-09-967-464-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                             nucleic search, using sw model
                                                                                                                                                                                    IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                            1 tctcccagcgtgcgccat 18
                                                                                                                                                                                                                                                                       DB seq length: 0
DB seq length: 200000000
                                                                                                                               US-10-789-758A-2
18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11000.00
11000.00
11000.00
11000.00
11000.00
11000.00
11000.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1000.00
                                                                                      May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Perfect score:
                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score
                                                               •
                                                             OM nucleic
                                                                                                                                                              Sequence:
                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                         Minimum |
Maximum |
                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22109871193710987465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
```

υ

Gaps

ö

Indels

ö

3; Length 18;

```
end-blocked CpG-PS modified oligodeoxynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 18; DB
100.0%; Pred. No. 57;
tive 0; Mismatches
CURRENT APPLICATION NUMBER: US/09/965,116A
CURRENT FILING DATE: 2002-03-08
PRIOR PRILICATION NUMBER: US 09/712,898
PRIOR FILING DATE: 2000-11-15
PRIOR FILING DATE: 2000-09-26
PRIOR PLILING DATE: 2000-09-26
PRIOR PLILING DATE: 2000-09-26
PRIOR PRILING DATE: 2000-09-26
NUMBER OF SEQ ID NOS: 112
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-965-116A-98
; Sequence 98, Application US/09965116A
; Patent No. US20020137714A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 777, Application US/09965116A Patent No. US20020137714A1 CENTRAL INFORMATION: APPLICANT: Kandimalla, Ekambar R. APPLICANT: Zhao, Qiuyan
                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: synthesis of end
OTHER INFORMATION: phosphorothioate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18 TCTCCCAGCGTGCGCCAT 1
                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 rereceaecerececar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-965-116A-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-965-116A-77
                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-965-116A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Zhao, Qiuyan
APPLICANT: Yu, Dong
APPLICANT: Agrawal, Sudhir
TITLE OF INVENTION: Modulation of Immunostimulatory
TITLE OF INVENTION: Modulation oligodeexynucleotide phosphorothioate Analogs by
TITLE OF INVENTION: Positional Chemical Changes
FILE REFERENCE: HYZ-479CP (47508.577)
  TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and TITLE OF INVENTION: Cytokines FILE REFERENCE: Cl039/7026/HCL CURRENT APPLICATION NUMBER: US/09/824,468 CURRENT FILING DATE: 2001-04-02 PRIOR APPLICATION NUMBER: 09/286,098 PRIOR PILING DATE: 1999-04-02 NUMBER OF SEQ ID NOS: 105 SEC ID NOS: 105 LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 104, Application US/09824468
Patent No. US20020064515A1
GENERAL INPORMATION:
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Cytokines
FILE REPRESENCE: C1039/7026/HCL
CURRENT APPLICATION NUMBER: US/09/824,468
CURRENT PAPLICATION NUMBER: 09/286,098
PRIOR FILING DATE: 2001-04-02
PRIOR FILING DATE: 199-04-02
NUMBER OF SEQ ID NOS: 105
SOFTWARE: FREESE FEESE FOR Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.0%; Score 18; DB 3; Length 18;
Best Local Similarity 100.0%; Pred. No. 57;
Matches 18; Conservative 0; Mismatches 0. Thatala
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
100.0%; Score 18; DB 3; Length 18;
Best Local Similarity 100.0%; Pred. No. 57;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) OTHER INFORMATION: Synthetic Sequence US-09-824-468-104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7, Application US/09965116A
Perent No. US20020137714A1
GREEAL INFORMATION:
APPLICANT: Kandimalla, Ekambar R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-965-116A-7/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
US-09-824-468-104
                                                                                                                                                                                                                                                                                                                                                                                  US-09-824-468-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
```

```
APPLICANT: Agrawal, Sudhir

APPLICANT: Agrawal, Sudhir

TITLE OF INVENTION: Modulation of Immunostimulatory Activity of Immunostimulatory;
ITTLE OF INVENTION: Modulation of Immunostimulatory Activity of Immunostimulatory;
ITTLE OF INVENTION: Modified oligodeoxynucleotide phosphorothioate Analogs by;
ITTLE OF INVENTION: Modified oligodeoxynucleotide phosphorothioate Analogs by;
ITTLE OF INVENTION: WOMBER: US/09/965,116A

CURRENT APPLICATION NUMBER: US 60/955,116A

FRIOR FILING DATE: 2000-11-15

PRIOR PILING DATE: 2000-09-26

PRIOR FILING DATE: 2000-09-26

PRIOR FILING DATE: 2000-09-26

NUMBER OF SEQ ID NOS: 112

SEQ ID NO 77

SEQ ID NO 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: modified linkage of oligodeoxynucleotide phosphorothioate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 18; DB 3; Length 18; 100.0%; Pred. No. 57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
```

Kandimalla, Ekambar R.

```
Sequence 51, Application US/09800266A
Betent No. US20020156033Al
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Bratzler, Robert L.
APPLICANT: Petersen, Deanna M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acids and
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION NUMBER: US/09/800,266A
CURRENT FILING DATE: 2001-03-05
RICHARD FILING DATE: 2000-03-03
NUMBER OF SEQ ID NOS: 146
SOFTWARE: PastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 51, Application US/09895007A

Sequence 51, Application US/09895007A

Patent No. US20020165178A1

GENERAL INFORMATION:

APPLICANT: Schetter, Christian

APPLICANT: Bratzler, Robert L.

APPLICANT: Petersen, Deanna M.

TITLE OF INVENTION: IMMONSTIMULATORY NUCLEIC ACIDS FOR THE

TITLE OF INVENTION: TREATMENT OF ANEMIA, THROMBOCYTOPENIA, AND NEUTROPENIA

TITLE OF INVENTION: USCOL-06-28

CURRENT APPLICATION NUMBER: US 60/214,368

PRIOR APPLICATION NUMBER: US 60/214,368

PRIOR PILING DATE: 2000-06-28

NUMBER OF SEQ ID NOS: 133

SOFTWARE: FastSEQ for Windows Version 3.0

LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%; Score 18; DB 3; Length 18; Best Local Similarity 100.0%; Pred. No. 57; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 18; DB 3;
100.0%; Pred. No. 57;
ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Synthetic oligonucleotide US-09-895-007A-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Synthetic Sequence US-09-800-266A-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ,18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
US-09-895-007A-51
                                                                                                                                                                                US-09-800-266A-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 51
LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
ઠે
                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Zhao, Qiuyan

APPLICANT: Zhao, Qiuyan

APPLICANT: Zhao, Qiuyan

APPLICANT: Yu, Dong

APPLICANT: Yu, Dong

APPLICANT: Yu, Dong

TITLE OF INVENTION: Modulation of Immunostimulatory

TITLE OF INVENTION: Modified oligodeoxynucleotide phosphorothioate Analogs by

TITLE OF INVENTION: Positional Chemical Changes

FILE REPERBUCE: HYZ-479CP (47508.577)

CURRENT APPLICATION NUMBER: US 09/712,898

PRIOR PILING DATE: 2000-11-15

PRIOR PPLICATION NUMBER: US 60/235,452

PRIOR PILING DATE: 2000-09-26

NUMBER OF SEQ ID NOS: 112

SOFTWARE: PRAESEQ for Windows Version 4.0

SEQ ID NO 99

LENGTH: 18

LENGTH: 18
                                                   APPLICANT: Agrawal, Sudhir TITLE OF INVENTION: Modilation of Immunostimulatory Activity of Immunostimulatory TITLE OF INVENTION: Modified oligodeoxynuclectide phosphorothioate Analogs by TITLE OF INVENTION: Positional Chemical Changes TITLE OF INVENTION: Positional Chemical Changes CURRENT EXPERIENCE: WYZ-479CF (47508.577)

CURRENT APPLICATION NUMBER: US/09/965,116A

CURRENT FILING DATE: 2002-03-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunostimulatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; LOCATION: 10,14
; OTHER INFORMATION: g at positions 10 and 14 = 7-deazaguanine
US-09-965-116A-99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 18; DB 3; Length 18; Best Local Similarity 100.0%; Pred. No. 57; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 100.0%; Score 18; DB Best Local Similarity 100.0%; Pred. No. 57; Matches 18; Conservative 0; Mismatches
                                                                                                                                                                                                                                                       PRIOR PILITATION NUMBER: US 09/712,898
PRIOR PILITATION NUMBER: US 09/712,898
PRIOR PILITATION NUMBER: US 60/235,452
PRIOR PILITO DATE: 2000-09-26
PRIOR PILITO DATE: 2000-09-26
PRIOR PILITOR DATE: 2000-09-26
NUMBER OF SEQ ID NOS: 112
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 98
LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 99, Application US/09965116A Patent No. US20020137714A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Kandimalla, Ekambar R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 rcrcccagccrcccar 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
   Zhao, Qiuyan
Yu, Dong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: modified_base
LOCATION: 10,14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-965-116A-98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-965-116A-99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

ö

Gaps

ö

Gaps

```
APPLICANT: WILL, DAVID W
TITLE OF INVENTION: POLYAMIDE NUCLEIC ACID DERIVATIVES AND AGENTS AND
TITLE OF INVENTION: POLYAMIDE NUCLEIC ACID DERIVATIVES AND AGENTS AND
TITLE OF INVENTION: PROCESSES FOR PREPARING THEM
FILE REFERENCE: 0241.172 SEQUENCE LISTING
CURRENT APPLICATION NUMBER: US/09/835,370
UURBER OF SEQ ID NOS: 64
SOFTWARE: PATENTIN VEY. 2.1
SEQ ID NO 21
                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Description of Artificial Sequence: nucleotid
OTHER INFORMATION: base sequence of PNA derivatives that bind to
OTHER INFORMATION: viral and cellular targets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 755, Application US/0988326
; Publication No. US20030026801A1
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; APPLICANT: Hattmann, Gunther
; TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
; TITLE OF INVENTION: Methods for Enhancing Cancer
; FILE REFERRNCE: C1039/7052 (AWS)
; CURRENT FILING DATE: 2001-06-22
; PRIOR PILING DATE: 2000-06-22
; NUMBER OF SEQ ID NOS: 848
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 18; DB 3; Length 18; Best Local Similarity 100.0%; Pred. No. 57; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 18; DB 3; Length 18; Best Local Similarity 100.0%; Pred. No. 57; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Weiner, George
PPLICANT: Hartmann, Gunther
TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
TITLE OF INVENTION: Cell Lysis and Treating Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
OTHER INFORMATION: Synthetic oligonucleotide
NAME/KEY: misc feature
LOCATION: (0)...(0)
TOTHER INFORMATION: phosphorothioate backbone
US-09-888-326-755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 756, Application US/09888326; Publication No. US20030026801A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 rereceasestates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rcrcccadcerececcar 18
                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Artificial Sequence
GERHARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-888-326-756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
US-09-888-326-755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-835-370-21
                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                            Sequence 21, Application US/09935371
Publication No. US20020187473A1
Publication No. US20020187473A1
GENERAL INFORMATION:
APPLICANT: UHLMANN: Eugen
APPLICANT: UNLEADN:
APPLICANT: WILL, David W
TITLE OF INVENTION: POLYAMIDE NUCLEIC ACID DERIVATIVES, AND AGENTS AND
TITLE OF INVENTION: POLYAMIDE NUCLEIC ACID DERIVATIVES, AND AGENTS AND
TITLE OF INVENTION: POLYAMIDE NUCLEIC ACID DERIVATIVES, AND AGENTS AND
FILE REFERENCE: 02481.1743 SEQUENCE LISTING
CURRENT APPLICATION NUMBER: US/09/035,371
CURRENT PILING DATE: 2001-04-17
NUMBER OF SEQ ID NOS: 53
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 21
ILENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Description of Artificial Sequence: base sequence OTHER INFORMATION: of PNA targeting CMV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11arity 100.0%; Score 18; DB 3; Length 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ch 100.0%; Score 18; DB 3; Length 18; 1 Similarity 100.0%; Pred. No. 57; 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Petersen, Deanna M.
TITLE OF INVENTION: Nucleic Acida for the Prevention and
TITLE OF INVENTION: Treatment of Gatric Ulcers
FILE REFERENCE: C1037/7019 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/920,313
CURRENT FILING DATE: 2001-08-01
PRIOR PRILING DATE: 2001-08-01
PRIOR PRILING DATE: 2001-08-03
NUMBER OF SEQ ID NOS: 148
SOFTWARE: FASELSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 21, Application US/09835370
Publication No. US20030022172A1
GENERAL INFORMATION: BUGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 51, Application US/09920313
Publication No. US20020198165A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rereceasestates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 rcrcccadcerdcdcar 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Bratzler, Robert L. APPLICANT: Petersen, Deanna M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-835-370-21
                                                            US-09-835-371-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-920-313-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-835-371-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 51
LENGTH: 18
```

ò

ó,

Gaps

ö

ö

Gaps

ö

ò 셤

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOSEPH 1982 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 1989 - 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
100.0%; Score 18; DB 3; Length 18;
Best Local Similarity 100.0%; Pred. No. 57;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.0%; Pred. No. 57;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Synthetic oligonucleotide primers US-09-931-732-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Synthetic oligonucleotide
NAME/KEY: misc_feature
LOCATION: (0)
1 THER INFORMATION: phosphodiester backbone
US-09-888-326-756
FILE REFERENCE: C1039/7052 (AWS)

CURRENT APPLICATION NUMBER: US/09/888,326

CURRENT FILING DATE: 2001-06-22

FRIOR APPLICATION NUMBER: US 60/213,346

FRIOR PILING DATE: 2000-06-22

NUMBER OF SEQ ID NOS: 848

SOFTWARE: PSESEQ for Windows Version 3.0

SEQ ID NO 756

LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
US-09-931-732-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

Search completed: May 4, 2006, 09:01:06 Job time: 269.966 secs

This Page Blank (uspto)

Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Minimum DB Maximum DB M

Database

```
Sequence 24, Application US/10918638
Publication No. US20050249663A1
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Copharos
TITLE OF INVENTION:
AND
TITLE OF INVENTION:
FILE REPERENCE: COPIO10
CURRENT APPLICATION NUMBER: US/10/918,638
CURRENT FILING DATE: 2004-08-12
PRIOR PLING DATE: 2002-09-17
NUMBER OF SEQ ID NOS: 32
SOFTWARE: Patentin version 3.3
US-11-134-918-55

US-11-031-60-55

US-11-05-58-55

US-11-099-683-132

US-10-994-213-9

US-10-994-213-9

US-10-994-213-1

US-11-127-654-105

US-11-229-183-490

US-11-229-183-490

US-10-925-065A-689222

US-09-925-065A-689222

US-09-925-065A-698222

US-09-925-065A-698222

US-09-925-065A-698222

US-09-925-065A-698222

US-10-925-065A-698222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 18; DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: oligonucleotide-- G3139 Genta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 10;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 14, Application US/10658947 Publication No. US20050255153A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Pre-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                 218821
                                                                                                                                                                                                                                   100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
US-10-658-947-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
US-10-918-638-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-918-638-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15.4
15.4
15.4
15.4
15.4
                                                                                                                                                                                                                                                                                                                       16.4
4.4
116.4
4.4
116.4
116.4
116.4
116.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE
        υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                               4, 2006, 08:17:52; Search time 410.793 Seconds
(without alignments)
178.449 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 6, A
Sequence 45,
Sequence 55,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 52,
Sequence 45,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 7,
Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1
Sequence 1
Sequence 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Published Applications NA New:*

| SIDSS/ptodata/2/pubpna/US08 NEW PUB.seq1:*
| SIDSS/ptodata/2/pubpna/US06 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US06 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US08 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US08 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US09 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US00 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US10 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US10 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US10 NEW PUB.seq:*
| SIDSS/ptodata/2/pubpna/US11 NEW PUB.seq:**
| SIDSS/ptodata/2/pubpna/US11 NEW PUB.seq:**
| SIDSS/ptodata/2/pubpna/US00 NEW PUB.seq:**
                          5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-918-638-24
US-10-658-947-14
US-10-6469-561-6
US-10-649-561-6
US-10-945-213-7
US-10-945-412-1
US-10-923-112A-52
US-10-923-112A-52
US-10-246-300D-24
US-11-296-572-55
US-11-127-654-1
US-11-127-654-1
US-11-081-140-6
                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                   9306428 segs, 2036268586 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
                          GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                          nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                     IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                             1 teteccagegtgegeeat 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq length: 0
seq length: 200000000
                                                                                                                                                                                                                            US-10-789-758A-2
18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                            Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           May
```

Sequence 113, App Sequence 490, App Sequence 555070, Sequence 669047, Sequence 79822, Sequence 7055, App

Sequence 102, App Sequence 104, App Sequence 105, App Sequence 40, Appl

81, Appl 1, Appli 2, Appli 2, Appli 19, Appli 4, Appli

Sequence Sequence

Sequence Sequence Sequence Sequence

Sequence

Sequence 2 Sequence 1 Sequence 4

Sequence 3 Sequence 3 Sequence 7 Sequence 7

Sequence Sequence 3

ö

Gaps

; 0

Length 18; Indels

Score

Result

υ

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 55, Application US/10435656
; Sequence 55, Application US/10435656
; Publication No. US20050277604A1
; GENERAL INFORMATION:
; APPLICANT: Kriteg, Arthur M.
; APPLICANT: Klinman, Dennis
; APPLICANT: Klinman, Dennis
; APPLICANT: Steinberg, Alfred D.
; TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
; TILE REFERENCE: C1039/7048 (AMS);
; CURRENT APPLICATION IMMERR: US/10/435,656
; CURRENT APPLICATION NUMBER: US 08/276,358
; PRIOR APPLICATION NUMBER: US 08/276,358
; PRIOR FILING DATE: 1995-02-07
; PRIOR FILING DATE: 1995-02-07
; PRIOR FILING DATE: 1995-02-07
; PRIOR FILING DATE: 1996-10-30
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: PastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: KITCHER, ARTHUL M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPERENCE: C1039/7023/HCL
CURRENT APPLICATION UNBER: US/10/619,279
CURRENT FILING DATE: 2003-07-14
PRIOR PELLON NUMBER: US 08/960,774
PRIOR PILING DATE: 1997-10-30
PRIOR PILING DATE: 1997-10-30
PRIOR APPLICATION NUMBER: US 08/738,652
PRIOR APPLICATION NUMBER: US 08/386,063
PRIOR PILING DATE: 1995-0-0-7
PRIOR PILING DATE: 1995-0-0-7
PRIOR PILING DATE: 1995-0-0-7
PRIOR PILING DATE: 1995-0-0-7
PRIOR PILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: FastSEQ for Windows Version 3.0
                                                             ) OTHER INFORMATION: synthetic immunostimulatory oligonucleotide US-10-469-561-6
                                                                                                                                                                 Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 18; DB 10; Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches 0;
                                                                                                                                                                         10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Synthetic Oligonucleotide US-10-619-279-45
                                                                                                                                                                     Score 18; DB
Pred. No. 10;
                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-619-279-45
; Sequence 45. Application US/10619279
; Publication No. US20050267057A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                              1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                  rcrcccadcerececcar 18
                                                                                                                                                                     Query Match

Best Local Similarity 100.0%;

Matches 18; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Artificial Sequence
ORGANISM: unknown FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            업
                                                                                                                                                                                                                                                                                                                     à
                                                                                                                                                                                                                                                                                                                                                                               셤
GENERAL INFORMATION:
APPLICANT: Inex Pharmaceuticals Inc.
TITLE OF INVENTION: High Efficiency Encapsulation of Charged Therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 18; DB 10; Length 18; 100.0%; Pred. No. 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                      STRAL-
CITY: DILLO..
STATE: CO
COUNTY: US
ZIP: 80435
COMPUTER READABLE FORM:
MURDIUM TYPE: Diskette, 3.5 inch, 1.44 Mb
COMPUTER: IBM COMPATIBLE
OPERATING SYSTEM: DOS 5.0
SOFTWARE: Word Perfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/658,947
FILING DATE: 09.5ep-2003
PRIOR APPLICATION NUMBER: cUNKNOWN>
FILING DATE: <UNKNOWN>
FILING DATE: <UNKNOWN>
TILING 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: <Unknown>
TELECOMMUNICATION INFORMATION:
TELEPHONE: <Unknown>
TELEPAK: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 6, Application US/10469561
Publication No. US20050260216A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Claiter Ashman
APPLICANT: James Scott Crowe
APPLICANT: Jonachan Henry Ellis
APPLICANT: Jonachan Henry Ellis
APPLICANT: Alan Peter Lewis
ITILE OP INVENTION: VACCINE
FILE REFERENCE: PG4355USW
CURRENT FILING DATE: 2003-08-29
NUMBER OF SEQ ID NOS: 25
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                            NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: Oppedahl & Larson LLP
STREET: PO BOX 5068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANTI-SENSE: yes
SEQUENCE DESCRIPTION: SEQ ID NO: 14:
                                                                                                                                        Lipid Vesicles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear
MOLECULE TYPE: other nucleic acid
HYPOTHETICAL: no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 18, Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-658-947-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
```

ð 셤

ö

```
OTHER INFORMATION: Synthetic Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                      q
                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/10482441C

Publication No. US20060041114A1

GENERAL INFORMATION:

APPLICANT: Nanda Sinha

APPLICANT: Nailiam Edward Zedalis

APPLICANT: William Edward Zedalis

PRICANT: Gregory Keith Miranda

TILLE OF INVENTION: OF STOIT ON 120 ON 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 7, Application US/10994213
| Publication No. US20060019911A1
| GENERAL INPORMATION:
| APPLICANT: Papisov, Mikhail, I.
| TITLE OF INVENTION: USE THEREOF
| TITLE OF INVENTION: USE THEREOF
| FILE REFERENCE: 09138, 1003-001
| CURRENT APPLICATION NUMBER: US/10/994,213
| CURRENT FILING DATE: 2004-11-19
| PRIOR FILING DATE: 2006-09
| PRIOR FILING DATE: 1999-08-09
| PRIOR FILING DATE: 1999-08-09
| NUMBER OF SEQ ID NOS: 13
| SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                         Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 18; DB 11; Length 18; 100.0%; Pred. No. 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                         Score 18; DB 10;
Pred. No. 10;
                                                                    FEATURE:

OTHER INFORMATION: Synthetic oligonucleotide
US-10-435-656-55
                                                                                                                                                                                                                                 Query Match
100.0%; Score 18; DE
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Synthetic Oligonucleotide US-10-994-213-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCTCCCAGCGTGCGCCAT 18
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-994-213-7/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-482-441C-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 7
LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
APPLICANT: Kosak, Kenneth M.

TITLE OF INVENTION: Chloroquine Coupled Nucleic Acids and Methods for Their Synthesi-
FILE REPRENCE: Confirmation No. 3293
CURRENT APPLICATION NUMBER: US/10/923,112A
CURRENT FILING DATE: 2004-08-21
NUMBER OF SEQ ID NOS: 54
SOFTWANDE: PatentIn version 3.3
SEQ ID NO 52
LENGTH: 18
                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
; OTHER INFORMATION: short DNA sequence synthesized by modified ; OTHER INFORMATION: phosphoramadite chemistry US-10-482-441C-1
                                                                                                            Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-192-82-82-45

US-192-82-82-45

Sequence 45, Application US/1038282

Publication No. US20060058251A1

GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Rinman, Dennis
APPLICANT: Steinberg, Alfred D.
TITLE OF INVENTION: Methods for Treating and Preventing
TITLE OF INVENTION: Infectious Disease
FILE REFERENCE: C01039.70062.US
CURRENT PELLORION NUMBER: US/10/382,822

CURRENT PELLORION NUMBER: US 09/630,319
PRIOR PELLORION NUMBER: US 09/630,774
PRIOR FILING DATE: 1997-10-30
PRIOR FILING DATE: 1996-10-30
PRIOR FILING DATE: 1996-10-30
PRIOR PELLORICATION NUMBER: US 08/738,652

PRIOR APPLICATION NUMBER: US 08/738,652

PRIOR FILING DATE: 1995-02-07

PRIOR FILING DATE: 1996-10-30

PRIOR FILING DATE: 1994-07-15

NUMBER OF SEQ ID NOS: 124

SEQUENCE: PRIOR SEQ FOR WINDOWS VERSION 3.0
                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 18; DB 11; Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches 0;
                                                                                                                  11;
                                                                                                          Query Match 100.0%; Score 18; DB Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 52, Application US/10923112A Publication No. US20060040879A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                   1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                         1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: ODN aldehyde US-10-923-112A-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-382-822-45
```

```
Best Local Similarity 100.0%; P
Matches 18; Conservative 0;
                                                                                                                                                            1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCTCCCAGCGTGCGCCAT 18
                                                                                                  1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 13
US-11-127-654-85
                                                                                                                                                                                                                                                                                 RESULT 12
US-11-127-654-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                             ઠ
                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 24, Application US/10246300D
Publication No. US20060074034A1
GREEAL INFORMATION:
APPLICANT: COPIATOS
TITLE OF INVENTION: DERIVATIVES THEREOF
TITLE OF INVENTION: DERIVATIVES THEREOF
CURRENT APPLICATION NUMBER: US/10/246,300D
CURRENT FILING DATE: 2002-09-17
NUMBER OF SEQ ID NOS: 32
SOFTWARE: Patentin version 3.3
SEQ ID NO 24
LENGTH: 18
                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 55. Application US/11296572

Subjication No. US2006009326A1

GENERAL INFORMATION:
APPLICANT: Kriene, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Steinberg, Alfred D.
TILE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPERBNCE: C1039/7048 (AMS)
CURRENT APPLICATION NUMBER: US/1/296,572
CURRENT APPLICATION NUMBER: US/0/818,918
FRIOR FILING DATE: 2005-12-07
FRIOR PRICHATION NUMBER: US 08/276,358
FRIOR FILING DATE: 1994-07-15
FRIOR PELING DATE: 1995-02-07
FRIOR APPLICATION NUMBER: US 08/386,063
FRIOR FILING DATE: 1995-02-07
FRIOR APPLICATION NUMBER: US 08/386,063
FRIOR FILING DATE: 1996-10-30
FRIOR PELING DATE: 1996-10-30
FRIOR PELING DATE: 1996-10-30
FRIOR PELING DATE: 1996-10-30
FRIOR PELING DATE: 1996-10-30
FRIOR APPLICATION NUMBER: US 08/738,652
FRIOR ELING DATE: 1996-10-30
FRIOR FILING DATE: 1996-10-30
                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
100.0%; Score 18; DB 13; Length 18;
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 18; DB 14; Length 18;
                                                                 Query Match
100.0%; Score 18; DB 12; Length 18;
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: oligonucleotide -- G3139 Genta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , OTHER INFORMATION: Synthetic oligonucleotide
US-11-296-572-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                    1 rereceasesiseseen 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
US-10-246-300D-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-246-300D-24
   US-10-382-822-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                      ઠે
```

100.001

Query Match

```
Sequence 85, Application US/11127654

Publication No. US2005025072641

GENERAL INFORMATION:

APPLICANT: Exteg, Archur M.

APPLICANT: Berg, Daniel J.

ITILE OF INVENTION: INFLAMMATORY DISEASES

FILE REFERENCE: C1039.70060US01

TITLE OF INVENTION: UNFLAMMATORY DISEASES

FILE REFERENCE: C1039.70060US01

CURRENT APPLICATION NUMBER: US/11/127,654

CURRENT FILING DATE: 2002-05-12

PRIOR FILING DATE: 2002-05-19

PRIOR FILING DATE: 2001-03-29

PRIOR FILING DATE: 2001-03-29

PRIOR FILING DATE: 2001-03-29

PRIOR FILING DATE: 2001-03-29

SOFTWARE PARENTED NOS: 1040

SOFTWARE PARENTED NOS: 1040

SOFTWARE PARENTED NOS: 1040

SOFTWARE PARENTED NOS: 1040

SEQ ID NOS: 1040

LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC TITLE OF INVENTION: IMMUNOSTIMULATORY DISEASES
PILE REFERENCE: C1039.70060US01
CURRENT APPLICATION NUMBER: US 11/127, 654
CURRENT PILING DATE: 2005-05-12
PRIOR PPLICATION NUMBER: US 60/219, 642
PRIOR PILING DATE: 2001-03-29
PRIOR PILING DATE: 2001-03-29
PRIOR PILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SOFTWARE: PatentIn version 3.2
SEQ ID NO 1
LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 100.0%; Score 18; DB 17; Length 18; Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 18; DB 17;
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ) OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-1
Pred. No. 10;
; Mismatches
                                                                                                                                                                                                                                                                                   ; Sequence 1, Application US/11127654; Publication No. US20050250726A1; GENERAL INFORMATION:
```

```
Search completed: May 4, 2006, 10:07:23
Job time : 410.793 secs
                           1 TCTCCCAGCGTGCGCCAT 18
                           ઠે
                                                                  셤
                                                                                                                                                                                                                                                  APPLICANT: Stein, Cy A
APPLICANT: Stein, Cy A
APPLICANT: Stein, Cy A
APPLICANT: Benimetekaya, Lyuba
APPLICANT: Benimetekaya, Lyuba
APPLICANT: Benimetekaya, Lyuba
APPLICANT: Guzzo-Pernell, Nancy
TITLE OF INVENTION: PEPTIDBS THAT COMPLEX WITH ANTISENSE OLIGONUCLEOTIDES WHICH DOWNR
TITLE OF INVENTION: PEC-PROTEIN EXPRESSION IN CELLS
TITLE OF INVENTION NUMBER: US/11/081,140
CURRENT FILING DATE: 2001-11-02
NUMBER OF SEQ ID NOS: 9
SOFTWARE: Patentin version 3.1
SEQ ID NO 6
LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-11-134-918-55
i Sequence 55, Application US/11134918
i Publication No. US20050267064A1
i GENERAL INFORMATION:
A APPLICANT: Krieg Arthur M.
APPLICANT: Krieg Arthur M.
APPLICANT: Krien, Joel N.
APPLICANT: Steinherg, Alfred D.
ITLE OF INVENT PAPLICATION IMMERE: US/11/134,918
FILE REFERENCE: C1039/7048 (AWS)
CURRENT FPLING DATE: 2005-05-23
PRIOR PRILAGATION NUMBER: US/09/818,918
PRIOR PLILAGATION NUMBER: US/09/818,918
PRIOR FILING DATE: 2001-03-27
PRIOR FILING DATE: 1994-07-15
PRIOR FILING DATE: 1995-02-07
PRIOR FILING DATE: 1995-02-07
PRIOR FILING DATE: 1996-10-30
NUMBER OF SEQ ID NOS: 56
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 55
LENGTH: 18
TYPE: NANA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match 100.0%; Score 18; DB 17; Length 18; Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
100.0%; Score 18; DB 17; Length 18;
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: ANTISENSE OLIGONUCLEOTIDE US-11-081-140-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Synthetic oligonucleotide US-11-134-918-55
                                                                                                                                                                          Sequence 6, Application US/11081140
Publication No. US20050261225A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCTCCCAGCGTGCGCCAT 18
  TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: ARTIFICIAL SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
ò
                                              윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
```

This Page Blank (uspto)

Perfect score:

Sequence:

,

OM nucleic

Run on:

Scoring table:

Minimum DB Maximum DB

Database

```
PAT 18-NOV-2000
CQ815137 Sequence
CQ825542 Sequence
CS083015 Sequence
CS083015 Sequence
CS110649 Sequence
CS110649 Synthetic n
E04645 Synthetic n
E04651 Synthetic n
E04650 Synthetic n
E04690 Synthetic n
E04701 Synthetic n
AR303120 Sequence
AX03949 Sequence
AX05949 Sequence
AX040405 Sequence
AX040405 Sequence
AX055929 Sequence
AX555929 Sequence
AX55929 Sequence
AX55929 Sequence
AX55929 Sequence
AX555929 Sequence
AX555929 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 24-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E04644 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .22

Organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="texon:32630"

/note="Synthetic construct of CpG oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vaccine comprising rsv antigen and cpg oligonucleotide Patent: WO 0062802-A 3 26-OCT-2000; SmithKline Beecham Biologicals s.a. (BE) Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6; Length 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 22; DB 100.0%; Pred. No. 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3 from Patent WO0100231. AX063577 AX063577.1 GI:12541301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22 bp
Sequence 3 from Patent WO0062802.
AX040404
   CC0815137
CC082942
CC027943
CS0831015
CS1084753
CS1084763
E04649
E04640
E04690
E04690
E04690
E04695
E04690
E04695
E04690
AX10110
AX101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX040404.1 GI:11230216
                                         synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22; Conservative
     Deschamps, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 22; Conserv
     DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
AX040404
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
AX063577
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX040404 Sequence
AX083577 Sequence
AX088931 Sequence
E04650 Synthetic
E04650 Synthetic
AX555928 Sequence
AX74078 Sequence
AX858995 Mycobacte
AY858999 Mycobacte
AY858990 Mycobacte
AY85891 Mycobacte
AX85891 Mycobacte
AX85891 Mycobacte
E0447 Synthetic n
A89781 Sequence 3
A90868 Sequence 3
BD056772 Pharmaceu
                                                                                                                         4, 2006, 02:22:43; Search time 510.805 Seconds (without alignments) 2448.208 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD261562 Vaccine.
CQ788115 Sequence
CQ788201 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                    5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                               5883141 segs, 28421725653 residues
                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                    GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                         nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E04650
AX555928
AX8559028
AY858990
AY858990
AY859007
AY859001
AY859013
B04647
A90868
BD056772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD261562
CQ788115
CQ788201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX063577
AX088931
                                                                                                                                                                                                                                      1 accgataacgttgccggtgacg
                                                                                                                                                                                                                                                                        IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                     length: 0
length: 2000000000
                                                                                                                                                                                                US-10-789-758A-3
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90 ba: 4
90 in: 4
90 on: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
10
                                                                                                                             May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       110:
13:::111:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                         Bed
```

ö

Score

ģ Result

KURAMOTO

```
PAT 09-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 27-NOV-2002
                                          18-JUL-1991 JP 1991178058
27-JUL-1990 JP 90P 197778
TOKUNAGA TORU, KATAOKA TETSURO, YAWAWOTO SABURO, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
100.0%; Score 22; DB 6; Length 30;
Best Local Similarity 100.0%; Pred. No. 32;
Matches 22; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                  6; Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                           _feature 1..30 /note='synthetic nucleotide with (GACGTC) structure'.
                                                                                                    YANO OSAMU, MAKINO TADASHI, SHIMADA SHIZUO A61K31/70,A61K31/70,A61K31/70,A61K31/70/C07H21/04; strandedness: Single; topology: Linear; hypothetical: No; anti-sense: No;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1..30
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="texon:32630"
/noTe="artificial sequence"
                                                                                                                                                                                                                                                                                          1. .30
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                       I parch 100.0%; Score 22; DB Local Similarity 100.0%; Pred. No. 32; nes 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kadowaki, N. and Liu, Y.J.
Dendritic cells, methods
Patent: WO 0234887-A 5 02-MAY-2002;
SCHERING CORPORATION (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30 bp
Squence 3 from Patent W003045431.
AX74078 GI:32485868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX555928 30 bp
Axquence 5 from Patent W00234887.
AX555928
AX555928.1 GI:25899386
Artificial sequence; Genes.
JP 1992352724-A/7
07-DEC-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 Accelaraterrecessing 22
                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
                                                                                                                                                                                                                                 misc_feature
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                      Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
AX555928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 6
AX774078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30 bp DNA linear PAT 29-SEP-1997
Synchetic nucleotide with (GACGTC) structure, having immunomodulation
activities.
                                                                                                                                                                                                                                                 ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                        PAT 17-MAR-2001
                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other sequences; artificial sequences.

1 (bases 1 to 30)
Tokunaga.T., Kataoka.T., Yamamoto,S., Kuramoto,E., Yano,O., Makino,T. and Shimada,S.
IMMUNOMODULATION TYPE THERAPEUTIC AGENT
PRICED: JP 1992352724-A 7 07-DEC-1992;
MITSUL TOATSU CHEM INC
                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 100.0%; Score 22; DB 6; Length 22; Similarity 100.0%; Pred. No. 32; 22; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                   Score 22; DB 6; Length 22;
Pred. No. 32;
                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="synthetic construct"
| mol_type="unsasigned DNA"
| Ab xref="taxon:32630"
| note="CpG containing oligonucleotide"
                                                                                                                                                                                                                                                 ô
                                                                                                                          /organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/noTe="oligonucleotide"
                                                             Patent: WO 0100231-A 3 04-JAN-2001;
SMITHKLINE BEECHAM BIOLOGICALS S.A. (BE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
other sequences; artificial sequences.
   other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent: WO 0100232-A 3 04-JAN-2001;
SmithKline Beecham Biologics SA (BE)
Location/Qualifiers
                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                             AX088931 22 bp
Sequence 3 from Patent WO0100232.
AX088931
                                 Cohen, J., Garcon, N. and Voss, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                               1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                               1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0%; Pr
Matches 22; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                   AX088931.1 GI:13397689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B04650.1 GI:2172846
JP 1992352724-A/7.
synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Garcon, N. and Voss, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Artificial gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 22; Conserva
                                                    Vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E04650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                    REFERENCE
AUTHORS
                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                          RESULT 3
AX088931
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                             合
                                                                                                                                                                                                                                                                                  ઠે
```

ö

Gaps

ö

Gaps

m

```
375 bp DNA linear BCT 16-JUN-2005
Mycobacterium avium complex strain MAIS-14 heat shock protein hsp65
AY858990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         атьзвэээ 375 bp DNA linear BCT 16-JUN-2005
Мусорастетium chimaera strain MAIS-6 heat shock protein hsp65 gene,
partial cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="IGAELYKEVAKKTDNVAGDGTTTATVLAQALVREGLRNVAAGAN
PLGLKRGIEKAVEKVTETLLKSAKEVETKDQIAATAAISAGDQSIGDLIAKAMDKVGN
EGVITVKESNTFGLQLELTEGMR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium; Mycobacterium avium complex (MAC).

1 (Dasses 1 to 375)
Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F.,
                                                                                                                                                                                                                                                                          Mycobacterium avium complex
Mycobacterium avium complex
Bacteria, Actinobacteria, Actinobacteridae; Actinomycetales,
Corynebacterineae; Mycobacteriaceae; Mycobacterium
avium complex (MAC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
Submitted (15-DEC-2004) Microbiologie, Hopital Saint Louis, 1
avenue Claude Vellefaux, Paris 75010, France
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                            Lebrum, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F., Gutierrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and Herrmann, J.-L.
Happes sample MAIS 14
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 (bases 1 to 375)
Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F.,
Gutlerrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and
Herrmann, J.-L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 375;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mycobacterium avium complex"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <1. ->375
/codon start=1
/transl table=11
/product = heat shock protein hsp65"
/protein id="AAW62477.1"
/db_xref="G1:58004838"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92.7%; Score 20.4; DB 1;
95.5%; Pred. No. 1.6e+02;
iive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="genomic DNA"
/strain="MAIS-14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:37162"
                      22
                                                           27 Acceacaacerreccesreace 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AY858999.1 GI:58004855
                                                                                                                                                                                                                                       AY858990.1 GI:58004837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mycobacterium chimaera
Mycobacterium chimaera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AY858999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21;
                        Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                     RESULT 8
AY858990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 9
AY858999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                      ઠ
                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /codon_start=3
/transl_table=11
/product="heat shock protein hsp65"
/protein_id="AAM62482.1"
/db_xref="G1:58004848"
/db_xref="G1:58004848"
KAGIEKAANKYTETLISAREVETKDQIVATAAISAANQSIGNLIABAMNKVGNEGVI
TVKDSNTLGLQLELTEGMRF"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AY858995
368 bp DNA linear BCT 16-JUN-2005
Mycobacterium avium complex strain MAIS-31 heat shock protein hsp65
gene, partial cd9.
AY858995
                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                        Vicari,A.P. and Caux,C.
Methods for treating cancer using a combination of a tumor-derived dendritic cell inhibitory factor antagonist and a toll-like receptor agonist
Patent: WO 03045431-A 3 05-JUN-2003;
SCHERING CORPORATION (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mycobacterium avium complex
Mycobacterium avium complex
Mycobacterium avium complex
Bacteria, Actinobacteria, Actinobacteridae,
Corynebacterineae, Mycobacteriaceae, Mycobacterium,
avium complex (MAC).

1 (bases 1 to 368)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
Submitted (15-DEC-2004) Microbiologie, Hopital Saint Louis, 1
avenue Claude Vellefaux, Paris 75010, France
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 (bases 1 to 368)
Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F.,
Gutierrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Casanova, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, Guliarraz, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and Herrmann, J.-L. Herrmann, J.-H. Hepfes, sample MAIS 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
.
                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 92.7%; Score 20.4; DB 1; Length 368; Best Local Similarity 95.5%; Pred. No. 1.6e+02; Matches 21; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                             Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mycobacterium avium complex"
/mol_type="genomic DNA"
/strain="MAIS-31"
                                                                                                                                                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                                                                                                                                                             9

    .30
    /organism="synthetic construct"

                                       other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                         Score 22; DB
Pred. No. 32;
                                                                                                                                                                                                                                                        /mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:37162"
                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                          22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ACCGATAACGTTGCCGGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AY858995.1 GI:58004847
                                                                                                                                                                                                                                                                                                                                                         100.0%;
synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      i. .368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Herrmann, J.-L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                       source
  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                           REFERENCE
                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AY858995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SGS
                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
```

ઠે 셤 ö

Gape

ö

```
/translation="QRIELEDPSEKIGAELVKEVAKKTDNVAGDGTTTATVLAQALVR
BGLRNVAAGANPLGLKRGIEKAVEKVTBTLLKSAKEVETKDQIAATAAISAGDQSIGD
LIAEAMDKVGNEGVITVEESNTFGLQLELTEGMRFN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E04647 29-SEP-1997 Synthetic nucleotide with (GACGTC) structure, having immunomodulation activities.
/protein_id="AAW62494.1"
/db_xref="G1:58004812"
/translation="IGAELVKEVAKKTDNVAGDGTTTATVLAQALVREGLRNVAAGAN
PLGIAKRGIRRAVKKTTETLLKSAKEVETKDQIAATAAISAGDQSIGDLIAKAMDKVGN
EGVITVKESNTFGLQLELTEGMR"
                                                                                                                                                                                                                                                                                                                   417 bp DNA linear BCT 16-JUN-2005 Mycobacterium avium strain MAIS-25 heat shock protein hsp65 gene, AY859013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mycobacterium avium
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Mycobacteriaceae; Mycobacterium; Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
Submitted (15-DEC-2004) Microbiologie, Hopital Saint Louis, 1
avenue Claude Vellefaux, Paris 75010, France
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  avium complex (MAC).

1 (bases 1 to 417)

Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F., Gutlerrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and Hermann, J.-L.

Hsp65 sample MAIS 25

Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 417)
Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F.,
Gutierrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92.7%; Score 20.4; DB 1; Length 417; 95.5%; Pred. No. 1.5e+02; ive 0; Mismatches 1; Indels (
                                                                                                                                     Length 375;
                                                                                                                                                                         1, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon_start=3
/transl_table=11
/product="heat shock protein hsp65"
/protein id="AAM62500.1"
/db_xref="G1:58004884"
                                                                                                                                   Score 20.4; DB 1;
Pred. No. 1.6e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. 417
/organism="Mycobacterium avium"
/mol_type="genomic DNA"
/strain="MAIS-25"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:1764"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93
                                                                                                                                                                                                                22
                                                                                                                                                                                                                                                  37 Acceacaacerreceereace sa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     72 ACCGACAACGTTGCCGGTGACG
                                                                                                                                                                                                                1 ACCGATAACGTTGCCGGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                             AY859013.1 GI:58004883
                                                                                                                                   Query Match
Best Local Similarity 95.5%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mycobacterium avium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . >417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Herrmann.J.-L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                             RESULT 11
AY859013
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E04647
                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                             /trānslation=""Gablykevakktdnvagdgtttatvlagalvreglrnvaagan
Plglkrgiekavkkvtetllksakevetkdqiaataaisagdqsigdilakamdkvgn
Bgvitvkesntfgloleltegmr"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BCT 16-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mycobacterium avium
Bacteria, Actinobacteridae, Actinomycetales,
Corynebacterines, Mycobacteriacae, Mycobacterium, Mycobacterium
avium complex (MAC).

1 (bases 1 to 375)
Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F.,
Gutierrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Onput seneral (2) (bases 1 to 375)
Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F., Gutierrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and Herrmann, J.-L.
Direct Submission
Submitted (15-DEC-2004) Microbiologie, Hopital Saint Louis, avenue Claude Vellefaux, Paris 75010, France
Location/Qualifiers
                                                                                2 (bases 1 to 375)
Lebrun, L., Weill, F.-X., Lafendi, L., Houriez, F., Casanova, F.,
Gutierrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and
                                                                                                                                                     Direct Submission
Submitted (15-DEC-2004) Microbiologie, Hopital Saint Louis,
avenue Claude Vellefaux, Paris 75010, France
Location/Qualifiers
       Gutierrez, M.-C., Ingrand, D., Lagrange, P., Vincent, V. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20.4; DB 1; Length 375;
Pred. No. 1.6e+02;
0; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /codon start=1
/transT_table=11
/product="heat shock protein hsp65"
                                                                                                                                                                                                                                                                                                                                 <1. .. >375
/codon start=1
/transl table=11
/product='heat shock protein hsp65"
/protein id="AAM62486.1"
/db_xref="G1:58004856"
                                                                                                                                                                                                                                  /organism="Mycobacterium avium"
/mol_type="genomic DNA"
/strain="MAIS-19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:1764"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37 Acceacaacerreccestrace 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AY859007.1 GI:58004871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 92.7%;
Best Local Similarity 95.5%;
Matches 21; Conservative (
                   Hap65 sample MAIS 6
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Herrmann, J.-L.
Hap65 sample MAIS 19
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mycobacterium avium
                                                                                                                                           Herrmann, J.-L.
                                                                                                                                                                                                                                          Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                           TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 10
AY859007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                    FRATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
```

ö

Gaps

ô

```
synthetic construct
IISM synthetic construct
other sequences; artificial sequences.

other sequences; artificial sequences.

other sequences; artificial sequences.

I (bases 1 to 30)

Nagner, H., Lipford, G.B. and Heeg, K.

Nagner, H., Lipford, G.B. and Heeg, K.

Nagner, H., Lipford, G.B. and Heeg, K.

Pharmaceutical composition comprising a polynucleotide and an antigen especially for vaccination
antigen especially for vaccination
AL PREMANN WAGNER, GRAYSON B LIPFORD, KLAUS HEEG

PN JP 201015087080-A/2

PN 23-JAN-1998 JP 1998531592

PR 23-JAN-1998 JP 1998531592

PR 23-JAN-1997 EP 97101019, EPFORD, KLAUS HEEG

PI HERMANN WAGNER, GRAYSON B LIPFORD, KLAUS HEEG

PC AGIK39/39, AGIK31/7088, AGIK39/00, AGIP37/04, CI2NIS/00

CC Strandedness: Single;

CC Topology: Linear;

FH KEY
                                                                                                                                                                                                           PAT 22-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD056772 30 bp DNA linear PAT 27-AUG-2002
Pharmaceutical composition comprising a polynucleotide and an
                                                                                                                                                                                                                                                                                                                                                                                                              Heeg, K.P. and Lipford, G.B.
Heeg, K.P. and Lipford, G.B.
Pharmaceutical composition comprising a polynucleotide and an antigen especially for vaccination antigen especially for vaccination Patent: EP 0855184-A 3 29-JUL-1998;
HEEG KLAUS PROF DR (DE); LIPPORD GRAYSON B DR (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 30;
                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 18.8; DB 6;
Pred. No. 9.7e+02;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 18.8; DB 6;
Pred. No. 9.7e+02;

    .30
    ^organism="synthetic construct"
/mol_type="genomic DNA"
    /db_xref="taxon:32630"

                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .30
/organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antigen especially for vaccination.
                                                                                                                                                                                                        30 bp
Sequence 3 from Patent EP0855184.
A90868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                22
                                                                 1 ACCGATGACGTCGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ACCGATGACGTCGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                        unidentified
unidentified
unclassified sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD056772.1 GI:22602378 JP 2001508780-A/2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    85.5%;
90.9%;
                                                                                                                                                                                                                                                                                          A90868.1 GI:6739262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 90.9
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
BD056772
LOCUS
DEFINITION
                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                             RESULT 14
A90868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      임
                                   ઠે
                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KURAMOTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 22-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 30)
Lipford, G.B. and Heeg, K.
PHARMACEUTICAL COMPOSITIONS COMPRISING A POLYNUCLEOTIDE AND OPTIONALLY AN ANTIGEN ESPECIALLY FOR VACCINATION
PATENT: WO 9812462-A 3 30-JUL-1998;
LIPFORD GRAYSON B (DE); HEEG KLAUS (DE)
Location/Qualifiers
                                                                         synthetic construct
synthetic construct
other sequences; artificial sequences.
I bases 1 to 29)
Tokunaga,T., Kataoka,T., Yamamoto,S., Kuramoto,E., Yano,O.,
Makino,T. and Shimada,S.
IMMUNOMODULATION TYPE THERAPEUTIC AGENT
Patent: JP 199232774-A 4 07-DEC-1992;
                                                                                                                                                                                                                                                                                                             Artificial gene
Artificial sequence, Genes.
JP 1992352724-A/4
07-DEC-1992
18-JUL-1990 JP 90P 197778
TOKUNAGA TORU, KATAOKA TETSURO, YAMAMOTO SABURO, PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 85.5%; Score 18.8; DB 6; Length 30; Best Local Similarity 90.9%; Pred. No. 9.7e+02; Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 85.5%; Score 18.8; DB 6; Length 29; Best Local Similarity 90.9%; Pred. No. 9.7e+02; Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YANO OSAMU, MAKINO TADASHI, SHIMADA SHIZUO A61K31/70, A61K31/70, A61K31/70, A61K31/70, A61K31/70/C07H21/04; strandednesse: Single; tcpology: Linear; hypothetical: No;

    .29
/note='synthetic nucle
with(GACGTC)structure'

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. 29
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30 bp
Sequence 3 from Patent WO9832462.
A89781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ACCGATGACGTCGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unidentified unclassified sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               anti-sense: No;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A89781.1 GI:6738295
                                                        JP 1992352724-A/4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unidentified
                                                                                                                                                                                                                                                                                                               Ar 800 Ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                           SOURCE
ORGANISM
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
```

ઠે 셤

0; Gaps 2; Indels Matches 20; Conservative 0; Mismatches

. 0

ò q

1 ACCGATAACGTTGCCGGTGACG 22

Search completed: May 4, 2006, 03:52:04 Job time : 511.805 secs

```
Aav45994 Immune ad Aax745994 Immune ad Aax78804 HPV fusio Aac60279 Immunosti Aaf59807 Immunosti Abk85997 Dendritic Abk85997 Dendritic Abk85997 Dendritic Abk85997 Dendritic Abk85997 Dendritic Abk85997 Immunosti Abr88590 Immunosti Abr88590 Immunosti Abr58455 CpG immunosti Abr58455 CpG immunosti Abr58455 CpG immunosti Abr58456 Phosphoro Adr57123 Human tol Adl64034 CpG DNA o Adl64034 CpG DNA o Adl670603 Immunosti Adu70012 Immunosti Adu70012 Immunosti Adu70012 Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Replication protein A; immunostimulatory DNA; vaccine adjuvant; immunotherapy; cancer; allergic disease; inflammatory disease; inflammatory autoimmune disease; systemic lupus erythematosus; arthritis; psoriasis; gingivitis; sarcoidosis; multiple sclerosis; colitis; ileitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Detecting immunostimulatory DNA comprising contacting with replication protein A (RPA) and detecting complex formation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a
"optionally phosphorothioate backbone"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunostimulatory oligonucleotide AAC-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hume
                                                                    AAV45994
AAX78804
AAX78804
AAC60279
AAC60139
AAF9883
AAF959507
AAF859507
AAF859507
AAF859507
AAF85995
AAF859959
AAF859959
AAF859959
AAF859959
AAF859959
AAF859959
AAF859959
AAF87723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADQ07603
ADU70012
ADU70013
                                                  AAQ20877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Page 28; 101pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sweet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-AU001052.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98AU-00007288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA48593 standard; DNA; 22
  \circ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
/note= '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYQU ) UNIV QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sester DP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-400189/34.
  \dot{\alpha} 
                                                  WO200031540-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stacey KJ,
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA48593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA48593
Abk85996 Dendritic
Aa157122 Human tol
Adc51790 AAC-30 SE
Adq16746 Immunomod
Add16813 Immunomod
Adw37971 ODN plasm
Adw37977 ODN plasm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ODN plasm
ODN plasm
ODN plasm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aaa48594 Immunosti
Aaq20705 Immunosti
Aaq20707 Immunosti
Aaq20892 Immunosti
Aaq20881 Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human hsp
P. falcip
Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Aaa48593 Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunosti
                                                                                                                                                              4, 2006, 01:23:12; Search time 165.506 Seconds (without alignments) 885.910 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Adw37977 ODN
Adw37968 ODN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Aac64138 I
Aaf59503 I
Aah43896 H
Aaf27749 E
Aaq20708 I
Abk85996 C
                      GenCore version 5.1.7 (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9993994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                  4996997 segs, 3332346308 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                    nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AML57122
ADC51790
ADC16746
ADQ16613
ADW37971
ADW37977
ADW37968
AAAA48594
AAAC20705
AAQ200707
AAQ20092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA48593
AAC64138
AAF59503
AAH43896
AAF27749
AAQ20708
                                                                                                                                                                                                                                                                                                              accgataacgttgccggtgacg
                                                                                                                                                                                                                                                                                                                                                         IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    geneseqn2002as:*
geneseqn2002as:*
geneseqn2003as:*
geneseqn2003cs:*
geneseqn2003cs:*
geneseqn2003cs:*
geneseqn2004as:*
geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      genesedn1990s:*
genesedn2000s:*
genesedn2001as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geneseqn20058:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               geneseqn2001bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                geneseqn1980s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                                                                                                                                                                                                                                                         US-10-789-758A-3
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Geneseq 21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
Match Length
                                             Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
10
```

18.8 18.8 18.8 18.8

Score

Result Š. Post-processing:

Database

seq seq

88

Minimum Maximum Maximu

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Query Match

```
ö
Replication protein A (RPA) is involved in a novel method for detecting immunostimulatory DNA. The method involves combining a sample of DNA with RPA and detecting complex formation. This method can be used to identify agonists and antagonists of immunostimulatory DNA. Agonists or identify antagonists may be used as vaccine adjuvants and for, immunotherapy for cancer, allergic diseases, inflammatory diseases and inflammatory autoimmune diseases (eg. systemic lupus erythematosus, arthritis, psoriasis, ginglivitis, sarcoidosis, multiple sclerosis, colitis and ileitis). The present sequence is the immunostimulatory oligonucleotide AAC-22. This was used in the development of the novel method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a novel vaccine formulation comprising a respiratory syncytial virus (RSV) antigen and an immunostimulatory CpG oligonucleotide. The CpG motifs of the immunostimulatory oligonucleotide are unmethylated, and the backbone of the oligonucleotide is preferably all-phosphorothicate. The RSV antigen used may be F (fusion) protein, G attachment) protein, an FG fusion protein, an immunogenic derivative of any of these proteins, or inactivated RSV. RSV causes lower respiratory tract illness in humans, particularly in children and the elderly. The RSV vaccine of the invention is used for preventing or ameliorating RSV infection in a patient. The present sequence represents an immunostimulatory CpG oligonucleotide which may be used in the RSV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel vaccine formulation comprising a respiratory syncytial virus (RSV) antigen and an immunostimulatory CpG oligonucleotide useful for treating RSV infections mutations.
                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunostimulatory CpG oligonucleotide WD0003 used in an RSV vaccine.
                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunostimulatory oligonucleotide; CpG oligonucleotide;
respiratory syncytial virus; RSV; vaccine; phosphorothioate;
                                                                                                                                                                                                                                                                        100.0%; Score 22; DB 3; Length 22; 100.0%; Pred. No. 0.87; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                   Sequence 22 BP; 5 A; 6 C; 7 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                                                              1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                      1 Accearaacerreceereace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 9; Page 26; 34pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAC64138 standard; DNA; 22 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99GB-00009077.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-APR-2000; 2000WO-EP003516.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  respiratory syncytial virul unmethylated; adjuvant; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-FEB-2001 (first entry)
                                                                                                                                                                                                                                                                                                 Best Local Similarity 100.
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-679550/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200062802-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-APR-1999;
28-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Deschamps M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88888888888888888
                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

Sequence 22 BP; 5 A; 6 C; 7 G; 4 T; 0 U; 0 Other;

vaccine of the invention

```
ô
                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to an HIV vaccine comprising an HIV antigen and an immunostimulatory Oligonucleotide (AAF59501-AAF5960). With the exception of oligonucleotide WD1005 (AAF59505), the immunostimulatory oligonucleotide wD1005 (AAF59505), the immunostimulatory professed contain at least one unmethylated CpG motif. In preferred embodiments the internucleotide linkage is phosphorodithicate, although phosphodisater and other internucleotide bonds, or mixtures of linkages are within the scope of the invention. The HIV antigen may be selected from gpl60, gpl20, Nef. Tat, and Nef or Tat derivatives or fusion proteins. The vaccine is used for the prophylaxis or treatment of HIV infection in a patient. The present sequence represents a specifically claimed immunostimulatory CpG oligonucleotide for use in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New vaccine formulation comprising human immunodeficiency virus (HIV) antigen and immunostimulatory CpG oligonucleotide, useful for preventing and treating HIV infections in a patient.
                                                                                                                                                                                                                                                                                       Immunostimulatory CpG oligonucleotide WD1003 for use in an HIV vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                   ö
                                                                                                                                                                                                                                                                                                                       Immunostimulatory CpG oligonucleotide; adjuvant; HIV antigen;
HIV infection; vaccine; prophylaxis; treatment; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 22; DB 4; Length 22; 100.0%; Pred. No. 0.87;
100.0%; Score 22; DB 3; Length 22; 100.0%; Pred. No. 0.87; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 22 BP; 5 A; 6 C; 7 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                  22
                                                                    1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 10; Page 17; 23pp; English
                                                                                         1 ACCGATAACGTTGCCGGTGACG
                                                                                                                                                                                        BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUN-2000; 2000WO-EP005998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-JUN-1999; 99GB-00015205.
31-JAN-2000; 2000GB-00002200.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAH43896 standard; DNA; 22
                                                                                                                                                                                        AAF59503 standard; DNA; 22
                                                                                                                                                                                                                                                         (first entry)
                                    22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vaccine of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-122974/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Voss G;
                                                                                                                                                                                                                                                                                                                                                                                                               WO200100232-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                04-JAN-2001.
                                                                                                                                                                                                                                                         24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Garcon N,
                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                         AAF59503;
                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAH43896
ID AAH4
                                                                                                                                                     RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT
                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                    ద
                                                                        ð
```

m

Synthetic.

Ношо

```
/*tag= a
/note= "palindrome, i.e. complementary strand sequence is
identical reading 5'-3'"
                                                                                                                        Plasmodium falciparum; malaria; CpG oligonucleotide; vaccine; sporozoite;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New vaccine formulation, useful for preventing and treating plasmodium infection in a patient, comprises malaria antigen and immunostimulatory CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes a vaccine comprising a malaria antigen and an immunostimulatory CpG oligonucleotide. This is useful in the prevention and treatment of malaria caused by Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Natural killer cell; NK; immunodeficiency; autoimmune disease; CSF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 22; DB 5; Length 22; 100.0%; Pred. No. 0.87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunostimulatory oligonucleotide #6 contg. palindrome.
                                                                                 P. falciparum vaccine CpG oligonucleotide WD1003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 22 BP; 5 A; 6 C; 7 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                               (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 8; Page 16; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATAACGTTGCCGGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                             23-JUN-2000; 2000WO-EP005841
                                                                                                                                                                                                                                                                                                                                                                                                                                          Voss G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAQ20708 standard; DNA; 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                        Cohen J, Garcon N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-112392/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      anti-tumour; ss.
                                                                                                                                                                                                                           WO200100231-A2.
                                                                                                                                                                                     Unidentified.
                                                                                                                                                                                                                                                                                                                                                      29-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-MAY-1992
                                        03-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     feature
                                                                                                                                                                                                                                                                      04-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP468520-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
  AAF27749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAQ20708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAQ20708
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                     Human; heat shock protein; hsp60; inhibition; antagonist; antiallergic; pro-inflammatory immune response; immune system; inflammatory disease; immunostimulatory; antinflammatory; antidiabetic; immunosuppressive; antirheumatic; nootropic; antiarteriosclerotic; antimicrobial; antiulcer; neuroprotective; autoimmune disease; diabetes; multiple sclerosis; rheumatoid arthritis; myasthenia gravis; systemic lupus erythematosis; chronic inflammation; atherosclerosis; inflammatory bowel disease; reactive arthritis; chronic infection; graft rejection; gingivitis; gastritis; ulcer; thrombosis; allergy; acute infection; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  arthritis, myasthenia gravis, systemic lupus erythematosis, chronic inflammation, atherosclerosis, inflammatory bowel disease, reactive arthritis, chronic infections, graft rejection, gingivitis, gastritis, ulcer, thrombosis, allergy and acute infections. AAH43895 to AAH43899 and AAB99542 to AAB99673 represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein hsp60, which are capable of acting as antagonists of hsp60 characterised by their ability to reduce or prevent the induction of a pro-inflammatory immune response of cells of the innate immune system by hsp60. The peptides have antiinflammatory, antidiabetic, antirheumatic, immunosuppressive, noctropic, antiarteriosclerotic, antimicrobial, antiulcer, antiallergic and neuroprotective activities. The antagonists are useful in the treatment of an inflammatory disease or disorder, e.g. an autoimmune disease, diabetes, multiple sclerosis, rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            present invention describes anti-inflammatory peptides of heat shock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Anti-inflammatory peptides of hsp60, which are capable of acting as antagonists of hsp60, useful for treating an inflammatory disease or disorder, e.g. an autoimmune disease, diabetes, multiple sclerosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 22; DB 4; Length 22; 100.0%; Pred. No. 0.87;
                                                                                                Human hsp60 related immunostimulatory oligonucleotide #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 22 BP; 5 A; 6 C; 7 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Prec. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page 40; 76pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99EP-00125035.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-DEC-2000; 2000WO-IL000833
                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rheumatoid arthritis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-390150/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PEPT-) PEPTOR LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Elias D;
                                                                                                                                                                                                                                                                                                                                                                                                              WO200143691-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-DEC-1999;
15-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                      sapiens
                                                          04-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-JUN-2001
```

Kolb H,

ö

Gaps

; 0

0; Indels

90JP-00197778,

27-JUL-1990;

29-JAN-1992

踞.

AAF27749 standard; DNA; 22

Query Match

ઠ 셤

```
This invention relates to a novel method for inducing maturation of an interferon producing cell to a dendritic cell and inducing interferon alpha) production by the interferon producing cell upon viral stimulation. The method comprises contacting the interferon producing cell with a CpG nucleic acid. The method of the invention may have cell with a CpG nucleic acid. The method of the invention may have is useful for modulating the physiology of certain defined subsets of dendritic cells, as well as for regulating the production of various is useful for modulating the physiology of certain defined subsets of centriferons by subsets of dendritic cells. Specifically, the methods of the invention are useful for inducing IFN alpha production, IL-12 production, and interferon producing cells are useful in cellular therapy for viral infections and diseases such as human immunodeficiency virus (HIV), hepatitis and tumours. The present sequence represents an objection to the method of the invention cellular in cellular incontinual cellular cellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention relates to a novel method of treating cancer and comprises the administration of an effective amount of a tumour-desirved dendritic cell (DC) inhibitory antagonist in combination with an effective amount of Toll-like receptor (TLR) agonist to an individual in need of
                Inducing maturation of an interferon producing cell (IPC) to a dendritic cell or inducing interferon alpha production, for e.g. therapy of tumors, comprises contacting the IPC with a CpG nucleic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treating cancer, involves administering tumor-derived dendritic cell inhibitory factor antagonist in combination with Toll-like receptor agonist, to an individual in need of the treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cancer; tumour; dendritic cell; Toll-like receptor; TLR; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human toll-like receptor (TLR) 9 agonist oligonucleotide AAC-30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 22; DB 6; Length 30; 100.0%; Pred. No. 0.9; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 30 BP; 7 A; 10 C; 9 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 12; Page 16; 47pp; English.
                                                                                                                               Claim 4; Page 15; 24pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-NOV-2002; 2002WO-US038098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-NOV-2001; 2001US-0333434P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAL57122 standard; DNA; 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAC-30; CpG; human; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SCHE ) SCHERING CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-493377/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caux C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2003045431-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUN-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vicari AP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAL57122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAL57122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                    Immunostimulants contg. palindromic DNA - enhance interferon, macrophage activating factor and colony stimulating factor and promote lymphocyte proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                        This single-stranded oligonucleotide is one example of an immunostimulatory sequence containing a palindrome. The sequence is very similar to the sequence of the first 30 nucleotides of an immunostimulatory 45mer (see AAQ20698) but has a different palindromic sequence. It has a strong activity to augment the activity of mouse NK
                                                                                                                                  Shimada S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oligodeoxynucleotide; ODN; dendritic cell stimulation; ss; hepatitis; interferon producing cell; CpG; antiviral; anti-HIV; cytostatic; dendritic cell maturation; viral infection; HIV; tumour; human immunodeficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                  Yano O,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 22; DB 2; Length 30; 100.0%; Pred. No. 0.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'note - "OTHER phosphodiester backbone"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dendritic cell stimulating oligodeoxynucleotide AAC-30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 30 BP; 7 A; 10 C; 9 G; 4 T; 0 U; 0 Other;
                                                                                                                               Yamamoto S, Kuramoto E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'notes "Palindromic sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 AcceataAcerreceereace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .30
/*tag= a
/mod_base= OTHER
                                                                                                                                                                                                                                                                                                                                                                            Claim 12; Page 25; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                           (MITK ) MITSUI TOATSU CHEM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뗦.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-OCT-2000; 2000US-0243232P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-OCT-2001; 2001WO-US047529
                           90JP-00197778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABK85996 standard; DNA; 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                  Kataoka T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7. .12
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SCHE ) SCHERING CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-489942/52
                                                                                                                                                                                                                WPI; 1992-034272/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kadowaki N, Liu Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
tes 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200234887-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified base
                           27-JUL-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                               Tokunaga T,
Makino T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABK85996;
                                                                                                                                                              Makino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABK85996
```

g

ð

S

Page

ö

Gaps

```
The invention relates to a novel non-human model animal unresponsive to an immunopotentiating synthetic compound, characterised by lacking a gene function that encodes TLR7 which recognises an immunopotentiating synthetic compound. a polynuclectide of the invention has virucide activity, and is useful as a TRL agonist and TRL antagonist. The model animals are useful in studying the mechanism of action of imidazoquinoline compounds, and in screening remedies particularly synthetic compounds for viral infections. The present sequence is used in
treatment. The method has cytostatic activity through the activation of dendritic cells that are rendered hypo-responsive to activation stimuli by the disease. The method is useful for treating cancers such as melanoma, breast, pancreas, colon, ung, glioma, hepatocellular, endometrium, gastric, intestinal, renal, prostate, thyroid, ovarian, esticular, liver, head and neck, colorectal, oesophagus, stomach, eye, bladder, glioblastoma and metastatic carcinomas. The present sequence is that of CpG motif-containing unmethylated oligonucleotide AAC-30 of the invention, an agonist of Toll-like receptor (TLR) 9 and which is active
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Non-human model animals unresponsive to an immunopotentiating synthetic compound e.g. of imidazoquinoline type lacking TLR7-encoded gene function, useful in screening drugs.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ds; TLR7; immunopotentiating synthetic compound; virucide; TRL agonist; TRL antagonist; imidazoquinoline compound; viral infection; AAC-30.
                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                          100.0%; Score 22; DB 9; Length 30; 100.0%; Pred. No. 0.9;
                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                    Sequence 30 BP; 7 A; 10 C; 9 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 30 BP; 7 A; 10 C; 9 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (NISC-) JAPAN SCI & TECHNOLOGY CORP. (SUMU ) SUMITOMO PHARM CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 22; 59pp; Japanese.
                                                                                                                                                                                                                                                                                                                22
                                                                                                                                                                                                                                                                                                                                         1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ë
                                                                                                                                                                                                                                                                                                                1 ACCGATAACGTTGCCGGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yamaoka
                                                                                                                                                                                                                                                                                                                                                                                                                                             ADC51790 standard; DNA; 30 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-NOV-2001; 2001JP-00358295.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-NOV-2002; 2002WO-JP012234.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                     Local Similarity 100.
                                                                                                                                                                    on human dendritic cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tomizawa H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2003-513577/48.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAC-30 SEQ ID NO:3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SUMU ) SUMITOMO
(AKIR/) AKIRA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2003043588-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Akira S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADC51790;
                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                          ADC51790
     88888888888888888
                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                              셤
```

Score 22; DB 10; Length 30; Pred. No. 0.9;

100.0%; 100.0%;

Best Local Similarity

Query Match

```
ô
                                                                                                                                                                                                                                                                                                                                                       Immunomodulatory polymucleotide; INP; palindromic sequence; dinucleotide; trinucleotide; antimicrobial; antiallergic; antiasthmatic; dermatological; antiinflammatory; ophthalmological; immunosuppressive; antibacterial; vasotropic; antiparasatic; virucide; heparotropic; anti-HIV; cytostatic; antiulcer; nephrotropic; IgE-related disorder; T helper; (TH)2-type immune response; vaccine; prophylactic; immune; interferon-gamma; interferon-alpha; type I interferon; IFN-alpha; IFN-omega; IFN-gamma; plasmacytoid dendritic cell; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antiallergic, antiaethmatic, dermatological, antiinflammatory, ophthalmological, immunosuppressive, antibacterial, vasotropic, ontipacterial, vasotropic, antipacterial, vasotropic, antipacterial, vasotropic, antibacterial, vasotropic, and nephrotropic. The immunomodulatory polynucleotides can be used for ameliorating a symptom of an infectious disease and IgE-related disorder. The IMP, s may also be used for the treatment of a disorder associated with a T helper (TH)2-type immune response (e.g. allergies, allergy-induced asthma or acopic dermatitis), individuals receiving vaccines such as therapeutic vaccines (e.g. vaccines comprising an allergy epitope, a mycobacterial epitope or a tumour associated epitope) or prophylactic vaccines. The IMP's can also be used for the treatment of e.g. food allergies, rhinitis, atopic dermatitis, conjunctivitis, urticaria, shock,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a novel immunomodulatory polynucleotide (IMP) comprising a palindromic sequence. The palindromic sequence comprises at least 8 bases in length, which contains at least two dinucleotides (CG), and at least one trinucleotide (TCG) y tor near the 5' end of the polynucleotide. The CG dinucleotides are separated by 0 - 5 bases. The 5' T of the (TCG)y is positioned 0 - 3 bases from the 5' end of the polynucleotide. The (TCG)y is separated from the 5' end of the palindromic sequence by 0 - 2 bases. The palindromic sequence includes all or part of the (TCG)y sequence, where y = 1 or 2. The immunomodulatory polynucleotides have the following activities: antimicrobial,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunomodulatory polynucleotide useful for the treatment of e.g. atopic dermatitis comprises palindromic sequence comprising at least eight base in length, which contains at least two dinucleotides and at least one
    Gaps
  ;
0
  Indels
  ö
                                                                                                                                                                                                                                                                                                                       Immunomodulatory polynucleotide, SEQ ID No 25.
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; SEQ ID NO 25; 119pp; English.
                                          22
                                                                                22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ņ
                                                                 1 ACCGATAACGTTGCCGGTGACG
                                          1 ACCGATAACGTTGCCGGTGACG
  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fearon KL, Marshall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-DEC-2002; 2002US-0436122P.
13-FEB-2003; 2003US-0447885P.
01-MAY-2003; 2003US-0467546P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-DEC-2003; 2003WO-US041001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (DYNA-) DYNAVAX TECHNOLOGIES
                                                                                                                                                                                        ADQ16746 standard; DNA; 30
                                                                                                                                                                                                                                                                           07-OCT-2004 (first entry
  22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-525782/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004058179-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         trinucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-JUL-2004.
                                                                                                                                                                                                                                  ADQ16746;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dina D,
  Matches
                                                                                                                                                 RESULT 10
                                                                                                                                                                      ADQ16746
                                          ઠ
                                                                                셤
```

```
Hymenoptera sting allergies and drug allergies and parasitic infections; viral disease e.g. Hepatitis B, Hepatitis C, influenza, Acquired immunodeficiency syndrome (AIDS) and Herpes zoster; and cancer; inflammatory disorder e.g. ulcerative colitis; fibrotic disorder e.g. didopathic pulmonary fibrosis, scleroderma, cutaneous radiation-induced fibrosis, hepatic fibrosis including schietosomiasis-induced hepatic fibrosis. The IMP's may also be used to create a prophylactic vaccine to increase resistance to infection by bacterial or prophylactic vaccine to increase resistance to interferon almmune viral pathogens. The immunomodulatory polynucleotide modulates an immune cimulates cytokines including type I interferons e.g. IRN-alpha and IRN-comega and IRN-gamma, production from human cells; effectively stimulates cytokines including type I interferons e.g. IRN-alpha and IRN-comega and IRN-comega and activates plasmacytoid dendritic cells to undergo maturation which can result in retardation of plasmacytoid dendritic cell apoptosis in culture. This polynucleotide sequence dendritic call apoptosis in culture. This polynucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunomodulatory polynucleotide; IMP; palindromic sequence; dinucleotide; trinucleotide; antimicrobial; antiallergic; antiasthmatic; demaclogical; immunosuppressive; antibacterial; vasotropic; antiparastic; virucide; hepatotropic; anti-HIV; cytostatic; antiulcer; nephrotropic; IgE-related disorder; This.type: (TH)2-type immune response; vaccine; prophylactic; immune; interferon-gamma; interferon-alpha; type I interferon; IRN-alpha; IRN-alpha; IRN-anega; IRN-alpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunomodulatory polynucleotide useful for the treatment of e.g. atopic dermatitis comprises palindromic sequence comprising at least eight bases in length, which contains at least two dinucleotides and at least one trinucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.0%; Score 22; DB 13; Length 30;
Best Local Similarity 100.0%; Pred. No. 0.9;
Matches 22; Conservative 0; Mismatches 0: Indela
                                                                                                                                                                                                                                                                                                                                                                          Sequence 30 BP; 7 A; 10 C; 9 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunomodulatory polynucleotide, SEQ ID No 92.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fearon KL, Marshall J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADQ16813 standard; DNA; 30 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-DEC-2002; 2002US-0436122P.
13-FEB-2003; 2003US-0447885P.
01-MAX-2003; 2003US-0467546P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-DEC-2003; 2003WO-US041001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (DYNA-) DYNAVAX TECHNOLOGIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-525782/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2004058179-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-JUL-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADQ16813;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dina D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 용
             ò
```

The invention relates to a novel immunomodulatory polynucleotide (IMP)

Example 1; SEQ ID NO 92; 119pp; English.

```
comprising a palindromic sequence. The palindromic sequence comprises at least 8 bases in length, which contains at least two dinucleotides (CG), and at least one trinucleotide (TCG)y at or near the 5' end of the polynucleotide. The Cdinucleotides are separated by 0 - 5 bases. The 5' or of the CDC) in the (TCG)y is positioned 0 - 1 bases from the 5' end of the polynucleotide. The (TCG)y is separated from the 5' end of the polynucleotide. The (TCG)y sequence, where y= 1 or 2. The immunomodulatory polynucleotides have the following activities: antimicrobial, antimicropic, anti-HV, cycletatic, antiuleer, antiparasticic, virucide, hepatotropic, anti-HV, cycletatic, antiuleer, and nephrotropic. The immunomodulatory polynucleotides can be used for the treatment of a disorder associated with a T helper (TH) 2-type immune response (e.g. allergies, allergy explicit, antipic and also be used for the treatment of a disorder associated with a T helper (TH) 2-type immune response (e.g. allergies, allergy explicit, antipical, atopic dermattis), individuals receiving vaccines (e.g. vaccines of e.g. vaccines comprising an allergy explicit.

CC vaccines The IMP's and also be used for the treatment of e.g. food allergies, thinitis, atopic dermattis, conjunctivitis, urticaria, shock, varial disease e.g. ulceraties, collumnicativitis, urticaria, shock, varial disease e.g. ulceratics of the treatment of e.g. food allergies, thinitis, atopic dermattis, conjunctivitis, urticaria, shock, impantic pulmonary tibrosis, soleroderma, cutaneous radiation-induced indopatic pulmonary tibrosis, soleroderma, cutaneous radiation-induced inflammatory disorder e.g. ulcerative collitis; fibrotic disorder e.g. ulceratics of consist end of the invention of plasmacytoid dendritic cell apoptosis including chipscomming e.g. IRP-tarbitis of consistence of include
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BB; vaccine; hepatitis B; infection; cancer; cytostatic neoplasm;
virucide; antiinflammatory; hepatotropic; gastrointestinal disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 22; DB 13; Length 3. 100.0%; Pred. No. 0.9; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 30 BP; 7 A; 10 C; 9 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYMI-) UNIV MILITARY MEDICAL NO 2 PLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ODN plasmid related oligonucleotide #3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATAACGTTGCCGGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 Accearaacerreccesreace
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-JUL-2002; 2002CN-00136125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUL-2002; 2002CN-00136125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADW37971 standard; DNA; 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CN1468957-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JAN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADW37971;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADW37971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ኞ
```

ó;

셤

ò

```
The present invention provides one kind of high-copied and stable plasmid, which is prepared through combining oligonuclectide sequence ODN with immunostimulation to specific vector. The ODN inside the plasmid can stimulate immune cell without being modified with thiophosphate. The plasmid any be used as immune adjuvant and especially as adjuvant of therapeutic vaccine for treating hepatities and other chronic contagious diseases and tumors. The present sequence represents ODN plasmid related
                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                            ds, gene, vector, vaccine, hepatitis B; infection, cancer, cytostatic neoplasm; virucide, antiinflammatory, hepatotropic; gastrointestinal disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1796;
 Length 93;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1796 BP; 367 A; 553 C; 528 G; 348 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Plasmid used as human therapeutic vaccine adjuvant
                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 22; DB 13;
Pred. No. 1.3;
; Mismatches 0;
100.0%; Score 22; DB 13; 100.0%; Pred. No. 0.98;
                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunostimulatory oligonucleotide ACC-22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYMI-) UNIV MILITARY MEDICAL NO 2 PLA.
                                                                       1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 6; SEQ ID NO 1; 9pp; Chinese
                                                                                                         Accentacetreceercace 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Accearatectriccecreace 72
     100.08; F1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
                                                                                                                                                                                                   뮵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                                                                                                   ADW37968 standard; DNA; 1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-JUL-2002; 2002CN-00136125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JUL-2002; 2002CN-00136125
                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-SEP-2000 (first entry)
                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22; Conservative
                                                                                                                                                                                                                                                                                                         ODN plasmid related DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA48594 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-270526/26.
                  Best Local Similarity
Matches 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0i Z;
                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                         10-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CN1468957-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JAN-2004.
                                                                                                           68
                                                                                                                                                                                                                                     ADW37968;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA48594;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51
 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhao P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                               RESULT 14
                                                                                                                                                                                  ADW37968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA48594
                                                                                                                                                                                                       õ
                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                       plasmid, which is prepared through combining oligonucleotide sequence ODN with immunostimulation to specific vector. The ODN inside the plasmid can stimulate immune call without being modified with thiophosphate. The plasmid may be used as immune adjuvant and especially as adjuvant of therapeutic vaccine for treating hepatitis B and other chronic contagious diseases and tumors. The present sequence represents an ODN plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention provides one kind of high-copied and stable plasmid, which is prepared through combining oligonucleotide sequence ODN with immunostimulation to specific vector. The ODN inside the plasmid can stimulate immune call without being modified with thichobosphate. The plasmid may be used as immune adjuvant and especially as adjuvant of therapputic vaccine for treating hepatitis B and other chronic contagious related oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ss; vaccine; hepatitis B; infection; cancer; cytostatic neoplasm;
virucide; antiinflammatory; hepatotropic; gastrointestinal disease.
                                                                                                                                                              The present invention provides one kind of high-copied and stable
                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                          Score 22; DB 13; Length 30;
Pred. No. 0.9;
                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 93 BP; 17 A; 20 C; 40 G; 16 T; 0 U; 0 Other;
                                                                                      Plasmid used as human therapeutic vaccine adjuvant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plasmid used as human therapeutic vaccine adjuvant.
                                                                                                                                                                                                                                                                                                                        Sequence 30 BP; 7 A; 10 C; 9 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                   ő
                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ODN plasmid related oligonucleotide #5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYMI-) UNIV MILITARY MEDICAL NO 2 PLA.
                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 7; 9pp; Chinese.
                                                                                                                        Claim 3; Page 2; 9pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                             100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВР.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUL-2002; 2002CN-00136125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JUL-2002; 2002CN-00136125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADW37977 standard; DNA; 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 100.
                                                                                                                                                                                                                                                                                      related oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-270526/26.
                                                  WPI; 2004-270526/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CN1468957-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhao P, Qi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADW37977;
                                                                                                                                                                                                                                                                                                                                                             Query Match
               Zhao P,
                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADW3797
```

```
Replication protein A (RPA) is involved in a novel method for detecting immunostimulatory DNA. The method involves combining a sample of DNA with RPA and detecting complex formation. This method can be used to identify agonists and antagonists of immunostimulatory DNA. Agonists of immunotherapy for antagonists may be used as vaccine adjuvants and for, immunotherapy for autoimmune diseases, inflammatory diseases and inflammatory autoimmune diseases (eg. systemic lupus erychematosus, arthritis, psoriamis, ginglivitis, sarcoidosis, multiple sclerosis, colitis and ileitis). The present sequence is the immunostimulatory oligonucleotide ACC-22. This was used in the development of the novel method
Replication protein A; immunostimulatory DNA; vaccine adjuvant; immunotherapy; cancer; allergic disease; inflammatory disease; inflammatory autoimmune disease; systemic lupus erythematosus; arthritis; psoriasis; gingivitis; sarcoidosis; multiple sclerosis; colitis; ileitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Detecting immunostimulatory DNA comprising contacting with replication protein A (RPA) and detecting complex formation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 3; Length 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 22 BP; 4 A; 7 C; 8 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'Match 85.5%; Score 18.8; D
Local Similarity 90.9%; Pred. No. 30;
les 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                            Hume DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page 28; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                          Stacey KJ, Sester DP, Sweet MJ,
                                                                                                                                                                                                                                                                               98AU-00007288
                                                                                                                                                                                                                                          99WO-AU001052
                                                                                                                                                                                                                                                                                                                     (UYQU ) UNIV QUEENSLAND
                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-400189/34.
                                                                                                                                                            WO200031540-A1.
                                                                                                                                                                                                                                                                                 25-NOV-1998;
                                                                                                                                                                                                                                        25-NOV-1999;
                                                                                                                                                                                                   02-JUN-2000
                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 20
```

Search completed: May 4, 2006, 02:44:32 Job time : 167.506 secs

ઠે d

ö

Gaps

ö

Indela

```
BM4991093 LIT000010
BU038321 LIT0000227
DR619320 EST100944
CD855896 DH0AF232A
CD85382 DHOAF232A
EX837075 EX837075
BX837075 EX837075
BX826451 Arabidops
BX826451 Arabidops
BX826309 Arabidops
BX826309 Arabidops
BX826309 Arabidops
CL944005 OSIFSB001
DR911285 USDA-FP 1
AV633400 AV633400
CX715565 RTPQ1 35
AV636859 AV636859
AV636859 AV636859
AV636859 AV636859
                                                                                                                                                                                                                                                                                                                               CG441696 814 bp DNA linear GSS 17-SEP-2003
OGVHP85TH ZM_0.7_1.5_KB Zea mays genomic clone ZMMBMa0485002,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Eukaryota; Viridiplantae; Streptophyta; Eukaryota; Viridiplantae; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panticoideae; Andropogoneae; Zea.

1 (bases 1 to 814)
Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T., Citek, R.W., Nunberg, A., Robbins, D. and Lakey, N. Consortium for Maize Genomics
Ocher GSSs: OGYHP85TV
Contact: Cathy Whitelaw
          QGJ8E16.y
QGB13D16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:4577"
/clone="zkwBWa0485002"
/clone=lib="zM_07_1.5_KB"
/note="Vector: pBGSK-; Site_1: HincII; 0.7-1.5 kb
methylation filtered genomic DNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 83.6%; Score 18.4; DB 10; Length 814; Best Local Similarity 95.0%; Pred. No. 1e+02; Matches 19; Conservative 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9712 Medical Center Drive, Rockville, MD 20850, USA
Tel: 301-838-5843
Fax: 301-838-0208
                                                                                                                                                                                                                                                                           ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Zea mays"
/mol_type="genomic DNA"
/strain="B73"
                             BM493093
BM038321
BM619320
CD855696
CD85832
BM377439
BM377075
CMS0A34P
CMS0A352
CMS0A33W
CMS0A33W
CMSOA33W
CMSOA33W
                                                                                                                                                                      DR911285
AV633400
CO909188
CX715565
                                                                                                                                                                                                                   AV636859
AV395473
                                                                                                                                                                                                                                          AV392702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seq primer: TR
Class: methylation filtered.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 CCGATAACGTTGCCGGTGAC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: whitelaw@tigr.org
                                                                                                                                                                                                                                                                                                                                                       yenomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                CG441696
CG441696.1 GI:34820175
                               317
4403
4430
500
515
535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .814
                                                    Zеа шаув
                                                                                                                                                                                                                                                                                                                                                                                                             Zea mays
                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                           RESULT 1
CG441696
                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
LOCUS
                                 υυ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CG441696 OGVHP85TH
CC308727 ZAMBP0005
CL455084 ZAMBP0005
CC455100 P046-3-H1
CC755100 P046-3-H1
CC755377 P051-2-C1
CC75531026 OC B8021
CC850938 NDL.10902
DN63955 CGX91-D12
CD847930 DHOALB672C
CD852670 DHOALL8ZA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CW511638 Shotgun_P
CW511977 Shotgun_P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE523578 M38H35TM
BP825967 BE82567
BX838137 BX83137
CX942778 LamjGest3
CR257116 45-E01274
CA103306 SCEZHR104
BU014814 QGJ8H09.y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LamjGest3 ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AV823063 AV823063
BU010172 QGJ12K14
                                                                       4, 2006, 02:45:02; Search time 1559.34 Seconds (without alignments) 660.095 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                    82156650
         5.1.7
Biocceleration Ltd.
                                                                                                                                                                                             41078325 segs, 23393541228 residues
                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
         GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CT022132
CZB31026
CCB50938
DN693955
DN69395
CD847930
CW511638
CW511638
                                                                                                                                        1 accgataacgttgccggtgacg 22
                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CG441696
CZ308727
CL455084
CG752100
CG755877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE523578
BP825967
BX838137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CX942778
CB257116
CA103306
BU014814
AV823063
                                                                                                                                                             IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                          seq length: 0
seq length: 200000000
                                                                                                                US-10-789-758A-3
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                        95_68t4:*
95_68t5:*
95_68t6:*
95_68t7:*
95_9881:*
95_9881:*
                                                                                                                                                                                                                                                                                                                               gb_est1:*
gb_est2:*
gb_est3:*
gb_htc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            969
1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   203
                                                                                                                                                                                                                                                                                                                    EST:*
                                                                         May
                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                          0B
0B
                                                   OM nucleic
                                                                                                                                         Sequence:
                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                         Minimum
                                                                                                                                                                                                                                                   Maximum
                                                                        Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
```

υ

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

TITLE

JOURNAL

FEATURES

DEFINITION

RESULT 2 CZ308727

ద

```
Pristionchus pacificus
Pristionchus pacificus
Eukaryota; Metacos Penatoda; Chromadorea; Diplogasterida;
Eukaryota; Metacos Premionchus.
1 (bases 1 to 1141)
Srinivasan, J., Sinz, W., Jesse, T., Wiggers-Perebolte, L., Jansen, K.,
Buntler, J., van der Meulen, M. and Sommer, R.J.
An integrated physical and genetic map of the nematode Pristionchus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CG/52100 1141 bp DNA linear GSS 24-OCT-2003 P046-3-H11.za Ppa ECORI BAC Library Pristionchus pacificus genomic, genomic survey sequence.
Dr. Joachim Messing's lab
The Plant Genome Initiative at Rutgers, Waksman Institute, Rutgers
University
190 Prelinghuysen Road, Piscataway, NJ 08854, USA
Tel: 732 445 3801
Fax: 732 445 5735
Email: bharti@waksman.rutgers.edu
Seg primer: T7
Class: BAC ends
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xrefe="teaxon:54126"
/clone lib="Ppa EcoRI BAC Library"
/note="The library was generated by a partial digest of the genemic DNA with EcoRI and cloning into the BAC vector."
                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:4577"
/dlone="gwHBBb0482D20"
/lab_host="E. coli DH10B"
/clone lib="gwHBBb (HindIII)"
/note="Vector: pCUGI; Site_1: HindIII; Site_2: HindIII"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match

83.6%; Score 18.4; DB 10; Length 1141;
Best Local Similarity 95.0%; Pred. No. 1.1e+02;
Matches 19; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 18.4; DB 10; Length 1025; Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Evolutionary Biology
Max-Planck-Institute for Developmental Biology
Spemannstr. 37-39, Tuebingen D-72076, Germany
Tel: 00497071601371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mol. Genet. Genomics 269 (5), 715-722 (2003)
12884007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pacificus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: ralf.sommer@tuebingen.mpg.de
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .1141
/organism="Pristionchus
/mol_type="genomic DNA"
/strain="California"
                                                                                                                                                                                                            High quality sequence start: 121.
Location/Qualifiers
1. .1025
                                                                                                                                                                                                                                                                       /organism="Zea mays"
/mol_type="genomic DNA"
/cultivar="B73"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  312 CCGATAACTTTGCCGGTGAC 331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGATAACGTTGCCGGTGAC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CG752100.1 GI:37975230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 95.0%;
Matches 19; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fax: 00497071601498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Sommer RJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pacificus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bource
                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
CG752100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                              CZ308727 SMMBF Zea mays genomic clone ZMMBF0005017 3', genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSS 29-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota, Viridiplantae; Streptophyta, Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta, Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.

1 (bases 1 to 1025)
Bharti,Ak., Young, S., Kavchok,S., Keizer,G., Bronzino,A.C., Sequencing of the maize genome at PGIR (2003c)
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                           Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.

1 (bases 1 to 860)
Bharti,A.K., Nelson,A.B., Young,S., Keizer,G., Zohovetz,V., Fuks,G. and Messing,J.
Construction, Sequencing and Characterization of a Fosmid Library of the B73 Maize Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (2005).
Contact: Bharti.A.K.
Dr.Joachim Messing's lab
The Plant Genome Initiative at Rutgers, Waksman Institute, Rutgers University
190 Frelinghuysen Road, Piscataway, NJ 08854, USA
Tel: 732 445 3801
Fax: 732 445 5735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CL455084
ZMMBBb0482D20f ZMMBBb (HindIII) Zea mays genomic clone
ZMMBBb0482D20 5', genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83.6%; Score 18.4; DB 10; Length 860; 95.0%; Pred. No. le+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Zea mays"
/mol_type="genomic DNA"
/culfivar="genomic DNA"
/db xref="taxon:4577"
/db host="ERNISO05017"
/lab host="ZMMBF005017"
/clone lib="ZMMBF"
/note="Vector: pEpiFOS-5; Site_1: Eco721"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: bharti@waksman.rutgers.edu
Seq primer: Fos R
Class: fosmid ends.
Location/Qualifiers
1. .860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       134 CCGATAACTTTGCCGGTGAC 153
         383 CCGATAACTTTGCCGGTGAC 402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 CCGATAACGTTGCCGGTGAC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CL455084.1 GI:45781435
                                                                                                                                                                                                                                        CZ308727.1 GI:61747428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Bharti, A.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19, Conservative
                                                                                                                                                                                                  survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zea mays
                                                                                                                                                                                                                                                                                          Zea may8
                                                                                                                                                                                                                                                                                                             Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSS
                                                                                                                                                                                                                                                                  GSS
```

Query Match

ORIGIN

VERSION KEYWORDS SOURCE ORGANISM

TITLE JOURNAL COMMENT

REFERENCE AUTHORS

DEFINITION

RESULT 3 CL455084 LOCUS

셤 δ

ACCESSION

ö

Gaps

ö

Gaps

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

REFERENCE

AUTHORS

PUBMED COMMENT

FEATURES

JOURNAL

TITLE

DEFINITION

RESULT 5 CG755877

ઠ a

```
CZ831026 670 bp DNA linear GSS 26-JUL-2005
OC Ba0212M23.f OC Ba Oryza coarctata genomic clone OC_Ba0212M23
5', genomic survey sequence.
                                                                                             Bielefeld, Germany
Contact: Bernd Weisshaar
Contact: Bernd Weisshaar
Bielefeld University, D-33594 Bielefeld, Germany Bmail:
Universitaetestrasse 25, D-33594 Bielefeld, Germany Bmail:
bernd.weisshaar@uni-bielefeld.de
BAC end sequences of Brassica rapa BAC clone KBrH133M03; generated
as contribution to the 'Multinational Brassica rapa Sequencing
Project' Seq primer: m13f TGTAAAAGGACGCCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, Ehrhartoideae, Oryzeae, Oryza.

1 (Dassel to 670)
Kim, H., Collura, K., Wissotski, M., Byrne, M., Stum, D., Smart, D., Rao, K., Luo, M., Jetty, R., Kudrna, D., Muller, C., Soderlund, C. and
                                Submitted (09-AUG-2005) Weisshaar B., Bielefeld University,
Institute for Genome Research, Universitaetsstrasse 25, D-33594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Arizona (Oryza Map Alignment Project) - Arizona Genomics Institute Unpublished (2005)
Contact: Rod A. Wing
Arizona Genomics Institute
University of Arizona
Forbes Bullding Room 303, Tucson, AZ 85721-0036, USA
Tel: 520 621 1259
Fax: 520 621 1259
Email: rwing@genome.arizona.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone in-KBrH, Brassica rapa HindIII BAC library GF-SCF-1002, Vector: pCUGIBaci" /lab_host="E.coli DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 17.8; DB 11; Length 410;
Pred. No. 1.9e+02;
0; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Brassica rapa subsp. pekinensis"
/mol type="genomic DNA"
/strain="chifu type 401-42"
/cultivar="Chifu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FORWARD: TAA TAC GAC TCA CTA TAG GG
BACKWARD: CAC TCA TTA GGC ACC CCA
Plate: 0212 row: M column: 23
Seq primer: TAA TAC GAC TCA TAG GG
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oryza coarctata (Porteresia coarctata)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .670
/organism="Oryza coarctata"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 species="pekinensis"
| db xref="taxon:51351"
| clone="KBrH133M03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="genomic DNA"
/db_xref="taxon:77588"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="OC Ba0212M23"
                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             219 ACCGTTAACGTTGACGGTGAC 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ACCGATAACGTTGCCGGTGAC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CZ831026.1 GI:71270879
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80.9%;
90.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 80.9
Best Local Similarity 90.5
Matches 19; Conservative
Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .410
                                                                                                                                                                                                                                                                                                                                                                                Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oryza coarctata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wing, R.
OMAP (O)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CZ831026
                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pristionchus pacificus
Pristionchus pacificus
Bukaryota; Metazoa; Nematoda; Chromadorea; Diplogasterida;
Bukaryota; Metazoa; Nematoda; Chromadorea; Diplogasterida;
Bukaryota; Metazoa; Nematoda; Chromatorea; Diplogasterida;
1 (bases 1 to 1354)
1 (bases 2 to 1354)
1 (bases 3 to 1354)
1 (bases 2 to 1354)
1 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       410 bp DNA linear GSS 09-AUG-2005
KBFH133M03 genomic clone, KBFH (HindIII) BAC library Brassica rapa
subsp. pekinensis, genomic survey sequence.
                                                                                                                                                                                                                                                                            CG755877 1354 bp DNA linear GSS 24-OCT-2003 P051-2-C10.zb Ppa EcoRI BAC Library Pristionchus pacificus genomic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Brassica rapa subsp. pekinensis
Brassica rapa subsp. pekinensis
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicotyledons,
rosids; eurosids II; Brassicales; Brassicaceae, Brassica.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:54126"
/clone lib="Ppa EcoRI BAC Library"
/note="The library was generated by a partial digest of
the genomic DNA with EcoRI and cloning into the BAC
vector."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1354;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Evolutionary Biology
Max-Planck-Institute for Developmental Biology
Spenannstr. 37-39, Tuebingen D-72076, Germany
Tel: 00497071601371
Fax: 00497071601498
Email: ralf.sommer@tuebingen.mpg.de
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Viehoever,P., Holtgraewe,D. and Weisshaar,B.
BAC end sequences of Brassica rapa
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Pristionchus pacificus"
/mol type="genomic DNA"
/strain="California"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83.6%; Score 18.4; DB 10;
95.0%; Pred. No. 1.1e+02;
ive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 733 CGAGAACGTTGCCGGTGACG 752
                                                                                                    738 ccacaacerreceercace 757
                                   22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 CGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                         genomic survey sequence.
CG755877
CG755877.1 GI:37982815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CT022132.1 GI:71475863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 (bases 1 to 410)
Li, Y. and Weisshaar, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Sommer RJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 83.6
Best Local Similarity 95.0
Matches 19; Conservative
```

VERSION KEYWORDS SOURCE ORGANISM

ACCESSION

TITLE JOURNAL REFERENCE AUTHORS

REPERENCE AUTHORS

LOCUS RESULT 6 CT022132/c

ઠે 셤

ö

Gaps

LOCUS

RESULT 8 CC850938

ઠ

ACCESSION

VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS TITLE JOURNAL COMMENT

FEATURES

```
/Gione Ilda Shot-Coar Protal and poly A+ RNA was lablated from the indicated stickleback tissue, and a CDNA library was constructed in the Express I plasmid vector by Open Biosystems. First strand cDNA synthesis was primed with an 54 bp linker primer containing an oligodr sequence preceeded by a synthetic NoI site (first strand primer: 5 - GACTAGTTCTAGATGGGAGGGGCGCCC(T) 25-3). Following second strand synthesis, cDNAs were made blunt at the end corresponding to the original 5 prime end of mRNA, and cloned directionally into the NoI and EcoRV sites of Express 1. Note that the EcoRV site is typically destroyed in the blunt end cloning, leaving a junction of the form 'xxxATC' (where is ATC is the second half of the EcoRV site, and xxx is derived from the cDNA sequence). A map of the Express I vector is available at: http://www.openbiosystems.com/cdna library construction fa thup://www.openbiosystems.com/cdna library construction fa in DH108 (TI phage resistant) bacteria. Clones available from Cypen Biosystems:
                                                                            SM Gaterosteus acuteatus

Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterydi; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Gasterosteiformes;
Gasterosteidae; Gasterosteus.

E i (bases 1 to 1202)
S Kingsley, D.M., Peichel, C., Balabahdra, S., Grimwood, J., Dickson, M., Schmutz, J. and Myers, R.M.
Expressed sequence tags from Gasterosteus aculeatus
Contact: G1203)
Contact: G1203)
Contact: G1203)
Contact: G1203)
Stanford University School of Medicine
Stanford University School of Medicine
Fax: 650 320 5917
Fax: 650 320 5917
Fax: 650 320 5917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CD847930 203 bp mRNA linear EST 11-JUL-2003 DH0Ab67ZC09RM1 HaDevR1 Helianthus annus cDNA clone HaDevR167C09, mRNA sequence.
CD847930 CD847930.1 GI:32531752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/strain="Conner Creek sticklebacks, WA USA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://www.openbiosystems.com/stickleback"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 80.9%; Score 17.8; DB 8; Length 1 Best Local Similarity 90.5%; Pred. No. 2.3e+02; Matches 19; Conservative 0; Mismatches 2; Indels
                                                        Gasterosteus aculeatus (three spined stickleback)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="eyes"
/dev_stage="adult"
/lab_host="DH10B (T1 phage resistant)"
/clone_lib="SHGC-CGX"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Gasterosteus aculeatus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'sex="mixed male and female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:69293"
/clone="CGX91-D12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence start: 17
High quality sequence stop: 568
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: jane@shgc.stanford.edu
Plate: 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             344 ccdardaccerdecederace 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGATAACGTTGCCGGTGACG 22
  DN693955.1 GI:62050787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
CD847930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                              REFERENCE
AUTHORS
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1202 bp mRNA linear EST 30-MAR-2005
CGX91-D12.x1d-t SHGC-CGX Gasterosteus aculeatus cDNA clone
CGX91-D12 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="Notrebame_Liverpool-10902"
/clone_lib="Notre Dame_Liverpool"
/note="Vector: pECBAC1; Site_1: Hind III; The library was prepared from whole body tissue of newly hatched L1 larvae by David Severson at the University of Notre Dame and Hongbin Zhang"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                /dev_stage="mature"
/lab_host="DHIOB"
/clone llb="0E Ba"
/note="Vector: pAGIBAC1; Site_1: HindIII; Site_2: HindIII"
                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSS 24-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Aedes aegypti (yellow fever mosquito)
Aedes aegypti
Bukaryota;
Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Budoptera; Endopterygata; Diptera; Nematocera; Culicoidea;
Culicidae; Culicinae; Culicini; Aedes; Stegomyia.

I (bases I to 969)
BAC end sequencing of Aedes aegypti
Unpublished (2003)
Chr. GSS: NDL.10902.SP6
Contact: Brendan Loftus
Department of Bukaryotic Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CC850938 969 bp DNA linear GSS 24-JUI NDL.10902.T7 Notre Dame Liverpool Aedes aegypti genomic clone Notrebame Liverpool-10902, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                      Length 670;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 80.9%; Score 17.8; DB 9; Length 969; Best Local Similarity 90.5%; Pred. No. 2.2e+02; Matches 19; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9712 Medical Center Drive, Rockville, MD 20850, USA Tel: 301-838-3543 Fax: 301-838-0208
                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                   Query Match 80.9%; Score 17.8; DB 10; Best Local Similarity 90.5%; Pred. No. 2.1e+02; Matches 19; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: enta@tigr.org
Library was provided by David Severson
Seg primer: T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Aedes aegypti"
/mol_type="genomic DNA"
/strain="Liverpool"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:7159"
           tissue_type="leaves"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
1. .969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ccearaacerrecedeceace 515
                                                                                                                                                                                                                                                                                                                                                                            363 ACAGATAACGTTGCCGGTCAC 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 CCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                      1 ACCGATAACGTTGCCGGTGAC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC850938.1 GI:33202340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC850938
```

ö

Gaps

DEFINITION

RESULT 9

ð 셤

ORIGIN

ACCESSION

us-10-789-758a-3.rst

```
SM Triticum aestivum

Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta;

Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Pooldaes, Triticaes, Triticum.

E 1 (Dases 1 to 334)

S Gao, W. and Bennetzen, J.L.

Shotgun sequence analysis of the wheat genome

Unpublished (2004)

Contact: Bennetzen JL

Department of Genetics

University of Georgia

1057 Green Street, Athens, GA 30602, USA

Tel: 706 582 9729
                                                                                                                                                                                                                                                                 Shotgun P16_050.bl_Ta004 Triticum aestivum Shotgun Triticum aestivum Gorgun Triticum aestivum Gorgun Triticum CW511638 Gorgunic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CW511977 341 bp DNA linear GSS 06-OCT-2004 Shotgun P16_050.gl_Ta004 Triticum aestivum Shotgun Triticum aestivum genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:4565" /db_xref="taxon:4565" /clone lib="Triticum aestivum Shotgun" /clone lib="Triticum aestivum Shotgun" /clone lib="Organ: Seedling; Vector: PCR4-TOPO; Wheat genomic DNA was sheared and the 1-2 kb fragments were cloned into PCR4-TOPO vector"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Triticum aestivum
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae;
Pooideae, Triticeae, Triticum.
                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79.1%; Score 17.4; DB 10; Length 334; 94.7%; Pred. No. 3e+02; ive 0; Mismatches 1; Indels 0
                                                            Length 266;
                                                            th 79.1%; Score 17.4; DB 6; Senilarity 94.7%; Pred. No. 2.9e+02; 18; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Triticum aestivum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /wol_type="genomic DNA"
/cultivar="Chinese Spring"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Triticum aestivum (bread wheat)
                                                                                                                                                                                                                                                                                                                                                                                                                                 Triticum aestivum (bread wheat)
  /clone_lib="HaDevR5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                           ccearaacerceceerea 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gao, W. and Bennetzen, J.L.
                                                                                                                                                2 CCGATAACGTTGCCGGTGA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 GATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATTACGTTGCCGGTGACG 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CWS11977.1 GI:53841483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: maize@uga.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 341)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Class: shotgun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CW511977
                                                                                                                                                                                           85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
CW511977/c
                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                          RESULT 12
                                                                                                                                                                                                                                                                                 CW511638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CD852670 266 bp mRNA linear EST 11-JUL-2003 DHOALL8ZA12ZZM1 HaDevR5 Helianthus annuus CDNA clone HaDevR58A12,
               Helianthus annuus (common sunflower)
Helianthus annuus
Eukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons;
asterids; campanulids; Asterales; Asteraceae; Asteroideae;
Helianthuse; Helianthus.
Campanulids; Asterales; Asteraceae; Asteroideae;
Campanulids; Asterales; Asteraceae; Asteroideae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Helianthus annuus
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons; asterids; campanulids; Asterales; Asteraceae; Asteroideae; Heliantheae; Helianthus.
                                                                                                                                                                                    Genoplante, a major partnership french program in plant genomics Unpublished (2003)
Unpublished (2003)
Contact: Genoplante
Genoplante
Genoplante
1 1 69 47 54 00
Pax: 33 1 69 47 54 10
                                                                                                                                                                                                                                                                                                                                         This sequence has been generated in the framework of the french plant genomics programme 'Genoplante' (http://www.genoplante.com and http://genoplante-info.infobiogen.fr).

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genoplante, a major partnership french program in plant genomics Unpublished (2003)
Contact: Genoplante
Genoplante
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93, rue Henri Rochefort 91025 EVRY CEDEX France
Tel: 33 1 69 47 54 00
Fax: 33 1 69 47 54 10
This sequence has been generated in the framework of the french plant genomics programme 'Genoplante' (http://www.genoplante.com and http://genoplante-info.infobiogen.fr).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="HaDevR58A12"
/tissue_type="4 days after self-pollination embryo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     79.1%; Score 17.4; DB 6; 94.7%; Pred. No. 2.8e+02; iive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Helianthus annuus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Helianthus annuus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Helianthus annuus (common sunflower)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:4232"
/clone="HaDevR167C09"
/tissue_type="leaves"
/clone_lib="HaDevR1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/cultivar="psc8"
/db_xref="taxon:4232"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/cultivar="psc8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    67 CCGATAACGTCGCCGGTGA 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 CCGATAACGTTGCCGGTGA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA sequence.
CD852670
CD852670.1 GI:32536486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Genoplante.
                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                         TITLE
JOURNAL
COMMENT
                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
CD852670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
```

ò 셤

```
Contact: Motoaki Seki
Plant Functional Genomics Research Group
RIKEN Genomic Sciences Center

1. Royadai, Tsukuba, Ibaraki 305-0074, Japan
Tel: 81-298-36-4359
Fax: 81-298-36-9060
Bmail: meski@rtc.riken.go.jp
An Arabidopsis full-length cDNA library was constructed essentially
as reported previously (Seki et al., 1998, 2002).This clone is in a
modified pBluescript vector.
Please visit our web site (http://pfgweb.gsc.riken.jp and
http://rarge.gsc.riken.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  387 bp mRNA linear EST 16-FEB-2005
BP835967 RAFL19 Arabidopsis thaliana cDNA clone RAFL22-70-F16 5',
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Spermatophyta; Magnollophyta; eudicotyledons; core eudicotyledons; roside; eurosida II; Brassicales; Brassicaceae; Arabidopsis.
I (bases I to 387)
Seki, M., Ishida, J., Kamiya, A., Satou, M., Nakajima, M., Akiyama, K., Iida, K., Enju, A., Sakurai, T., Arakawa, T., Carninci, P., Fukuda, S., Shinozaki, K.
Inda, J., Kawai, J., Sasaki, D., Shiraki, T., Hayashizaki, Y. and Shinozaki, K.
Iarge-Scale Analysis of RIKEN Arabidopsis Full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="mixture of silique and flower"
/lab_host="DH10B"
/clone_lib="RAFL19"
/note="Site_1: BamH1; Site_2: Sall; Subtraction Library"
      /clone_lib="Arabidopsis developing seed"
/note="Organ: Developing seed; Vector: pBluescript SK-;
Site_1: EcoRI; Site_2: XhoII"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   79.1%; Score 17.4; DB 3; Length 387; 94.7%; Pred. No. 3.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                              Length 384;
                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                       Score 17.4; DB 2;
Pred. No. 3.1e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Arabidopsis thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="RAFL22-70-F16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Search completed: May 4, 2006, 07:17:52 Job time : 1563.34 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 324 GATAGCGTTGCCGGTGACG 342
                                                                                                                                                                                                                                                                                                                                                                                 327 GATAGCGTTGCCGGTGACG 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 GATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                           4 GATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP825967.1 GI:59879153
                                                                                                                                                                       Query Match
Best Local Similarity 94.7%;
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 94.7
Matches 18, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
BP825967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48824, USA
Tel: 517 355 1609
Fax: 517 353 9334
Famil: benning@mau.edu
Michigan State University DNA Sequencing Facility Arabidopsis
Biological Resource Center, The Ohio State University, 309 Botany & Zoology Bldg., 1735 Neil Avenue, Columbus, OH 43210 USA, FAX: 6142920603 TEL: 6142929371.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE523578 384 bp mRNA linear EST 19-MAR-2001
BBBHSTTM Arabidopsis developing seed Arabidopsis thaliana CDNA
Clone M38H3 5', mRNA sequence.
BE523578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="genomic DNA"
/mol_type="chinese Spring"
/db xref="taxon.4565"
/clone lib="Triticum aestivum Shotgun"
/clone lib="Triticum ae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Bukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Wagnoliophyta; eudicotyledons; core eudicotyledons;
rosida; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
I (bases I to 384)
White, J.A., Todd, J., Newman, T., Focks, N., Girke, T., Martinez de
Ilarduya,O., Jaworski, J.G., Ohlrogge, J. and Benning, C.
A new set of Arabidopsis expressed sequence tags from developing
seeds. The metabolic pathway from carbohydrates to seed oil
Ill15876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Benning, C
Dept. of Biochemistry & Molecular Biology
Michigan State University
224 Biochemistry, Michigan State University, East Lansing, MI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 341;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 94.7%; Pred. No. 3e+02;
Matches 18; Conservative 0; Mismatches 1; Indels
Shotgun sequence analysis of the wheat genome Unpublished (2004)
Contact: Bennetzen JL
Department of Genetics
University of Genetics
University of Georgia
1057 Green Street, Athens, GA 30602, USA
Tel: 706 542 9729
Fax: 706 583 0972
Email: maize@uga.edu
Class: shotgun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="seed"
/dev_stage="5-13 days after flowering"
/lab_host="E.coli"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Arabidopsis thaliana"
                                                                                                                                                                                                                                                                                                                                                                                                             organisme"Triticum aestivum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/ecotype="Columbia"
/db_xref="taxon:3702"
/clone="M38H3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BE523578.1 GI:9781556
                                                                                                                                                                                                                                                                                                                                                                                 1. .341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
      TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
BE523578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEATURES
                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
```

셤 ò

ò

```
RESULT 1
US-09-690-921-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-690-921-3
1188.8
1188.9
1188.9
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
1177.7
11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Appli
Sequence 164, App
Sequence 1, Appli
Sequence 2, Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 23, Appli
Sequence 23, Appli
Sequence 22, Appli
Sequence 22, Appli
Sequence 22, Appli
Sequence 32, Appli
Sequence 33, Appli
Sequence 34, Appli
Sequence 35, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Appli
                                                                                                                                                                     May 4, 2006, 03:52:26 ; Search time 46.5287 Seconds (without alignments) 840.478 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                         GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     / Cgn2 6/ptodata/1/ina/1 COMB.seq:*
/ cgn2 6/ptodata/1/ina/5_COMB.seq:*
/ cgn2 6/ptodata/1/ina/6_COMB.seq:*
/ cgn2 6/ptodata/1/ina/6_COMB.seq:*
/ cgn2 6/ptodata/1/ina/H_COMB.seq:*
/ cgn2 6/ptodata/1/ina/H_COMB.seq:*
/ cgn2 6/ptodata/1/ina/PCTUS COMB.seq:*
/ cgn2 6/ptodata/1/ina/PP_COMB.seq:*
/ cgn2 6/ptodata/1/ina/PP_COMB.seq:*
/ cgn2 6/ptodata/1/ina/PP_COMB.seq:*
/ cgn2 6/ptodata/1/ina/PP_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-690-921-3
US-09-301-829A-3
US-09-672-126B-164
US-08-105-168B-1
US-08-105-168B-2
US-08-105-168B-2
US-08-698-948-1
US-08-698-948-2
US-08-698-948-2
US-08-698-948-2
US-08-698-948-2
US-08-698-948-2
US-08-698-948-2
US-08-698-948-2
US-08-698-948-2
US-08-613-303-32
US-08-613-303-32
US-08-613-303-32
US-08-613-303-32
US-08-613-303-32
US-08-613-303-32
US-08-613-303-33
US-08-613-303-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-613-303-3
US-10-267-311-3
US-09-712-363-23
US-09-613-303-16
US-10-267-311-16
US-09-613-303-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1303057 segs, 888780828 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                              1 accgataacgttgccggtgacg 22
                                                                                                                              - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                 IDENTITY NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                              US-10-789-758A-3
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                              OM nucleic
                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                    Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Result
```

```
Sequence 28, Appli
Sequence 9, Appli
Sequence 11, Appli
Sequence 5, Appli
Sequence 20, Appli
Sequence 20, Appli
Sequence 20, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 1, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                        Sequence 3, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 15789, A
Sequence 28, Appl
Sequence 30, Appl
Sequence 30, Appl
Sequence 3, Appl
Sequence 1875, A
Sequence 895, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
US-10-267-311-28

US-10-068-059-9

US-10-068-059-1

US-10-068-059-1

US-10-068-059-1

US-10-068-059-5

US-09-611-303-20

US-09-103-840A-1

US-08-105-168B-7

US-08-252-991A-15875

US-09-252-991A-15875

US-09-252-991A-15875

US-09-252-991A-15875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ch 85.5%; Score 18.8; DB 3; 1 Similarity 90.9%; Pred. No. 7.7; 20; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/0969021
Patent No. 6544518
GENERAL INFORMATION:
APPLICANT: Friede, Martin
APPLICANT: Gerard, Catherine
APPLICANT: Gerard, Catherine
TITLE OF INVENTION: Vaccines
TITLE OF INVENTION: Vaccines
FILE REFERENCE: B45181-1
CURRENT FILING DATE: 2000-10-18
PRIOR APPLICATION NUMBER: US/09/690,921
CURRENT FILING DATE: 2000-04-04
PRIOR APPLICATION NUMBER: 09/301,829
PRIOR FILING DATE: 1999-04-29
PRIOR FILING DATE: 1999-04-19
NUMBER OF SEQ ID NOS: 5
NUMBER OF SEQ ID NOS: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 3. Application US/09301829A
Patent No. 6558670
GENERAL INFORMATION:
APPLICANT: Friede, Martin
APPLICANT: Hermand, Philippe
TITLE OF INVENTION: VACCINES
FILE REFERENCE: B45181
CURRENT APPLICATION NUMBER: US/09/301,829A
CURRENT FILING DATE: 1999-04-29
PRIOR APPLICATION NUMBER: GB9908885.8
                                                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATGACGTCGCCGGTGACG 22
                             Query Match
Best Local Similarity
 ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 2
US-09-301-829A-3
```

```
US-08-105-168B-1
                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                               OTHER INFORMATION: Immunostimulatory oligonucleotide sequence comprising OTHER INFORMATION: one or more CpG motifs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 85.5%; Score 18.8; DB 3; Length 30; Best Local Similarity 90.9%; Pred. No. 7.7; Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                     Query Match 85.5%; Score 18.8; DB 3; Length 30; Best Local Similarity 90.9%; Pred. No. 7.7; Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-672-126B-163

US-09-672-126B-163

i Sequence 163, Application US/09672126B

i Releat No. 6949520

i GENERAL INFORMATION:

APPLICANT: Hartmann, Gunther

APPLICANT: Bratzler, Robert L.

APPLICANT: Krieg, Arthur

ITILE OF INVERTION: Methods Related to Immunostimulatory

ITILE OF INVERTION: Nucleic Acid-Induced Interferon

FILE REFERENCE: C1039/7044

CURRENT APPLICATION NUMBER: 08/09/672,126B

CURRENT PILING DATE: 2000-09-27

PRIOR APPLICATION NUMBER: 60/166,147

PRIOR PLICE DATE: 1999-09-29

NUMBER OF SEQ ID NOS: 169

SOFTWARE: FRASERQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-672-126B-164

1 Sequence 164, Application US/09672126B
1 Patent No. 6949520
1 GENERAL INFORMATION:
2 APPLICANT: Hartmann, Gunther
3 APPLICANT: Bratzler, Robert L.
3 APPLICANT: Bratzler, Robert L.
3 APPLICANT: Krieg, Arthur
5 TITLE OF INVENTION: Muched Related to Immunostimulatory
7 TITLE OF INVENTION: Muched Related to Interferon
8 TITLE OF INVENTION: Nucleic Acid-Induced Interferon
9 FILE REPERRICE: C1039/OP-09-27
1 CURRENT APPLICATION NUMBER: US/09/672,126B
1 CURRENT PALLING DATE: 1999-09-29
1 NUMBER OF SEQ ID NOS: 169
1 SOUTH OF SEQ ID NOS: 169
1 SEQ ID NO 164
1 LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , OTHER INFORMATION: Synthetic Oligonucleotide
US-09-672-126B-164
PRIOR FILING DATE: 1999-04-19
NUMBER OF SEQ ID NOS: 3
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 3
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                              1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 Accearcacerceceerace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 Acceargacercecceerdace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
                                                                                                                                    TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                   US-09-301-829A-3
                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   요
                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

```
RESULT 5

US-08-105-168B-1

US-08-105-168B-1

Sequence 1, Application US/08105168B

Patent No. 5589585

GENERAL INFORMATION:

TITLE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DE'T TITLE OF INVENTION: MYCOBACTERIA

TITLE OF INVENTION: MYCOBACTERIA

TITLE OF INVENTION: MYCOBACTERIA

TITLE OF INVENTION: MYCOBACTERIA

CORRESPONDENCES: 23

CORRESPONDENCE ADDRESS:
                                                                                                                                                                            ö
                                                                                                                                                                            Gape
                                                                                                                                                                            ö
                                                                                                                                   Length 45;
                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSER: Oliff & Berridge
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria,
ZTATE: Virginia
ZIP: 22314
COMPUTER READALE FORM:
MEDIUM TYPE: 3.5" DS/HD
COMPUTER: IBM compatible
OPERAITHG SYSTEM: MS DCS 3.1
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
FILING DATE: AUGUST 12, 1993
APPLICATION NUMBER: US/08/105,168B
CLASSIFICATION DATA:
FILING DATE: AUGUST 18, 1992
ATTORNEY/AGENT INFORMATION:
APPLICATION NUMBER: $3.0.024
REGISTRATION NUMBER: 30,024
RECOMMUTICATION INFORMATION:
TELEPHONE: (703) 836-6400
TELEFACOMINICATION INFORMATION:
TELEPHONE: (703) 836-2787
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 268 base pairs
LENGTH: 268 base pairs
TYPE: nucleic acid
STRANDENESS: saingle-stranded
                                                                                                                                   DB 3;
                                       FEATURE:

CTHER INFORMATION: Synthetic Oligonucleotide
US-09-672-126B-163
                                                                                                                              Score 18.8; DE Pred. No. 8; 0; Mismatches
                                                                                                                                                                                                                        1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                 1 Accentracerceceerance 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ANTI-SENSE:
ORIGINAL SOURCE:
ORGANISM: Mycobacterium bovis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                   Query Match
Best Local Similarity 90.9%;
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: 461-728
IDENTIFICATION METHOD:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HYPOTHETICAL:
```

```
RESULT 7
US-08-105-168B-5
is Sequence 5. Application US/08105168B
j Patent No. 5589585
j GENERAL INFORMATION:
i TITLE OF INVENTION:
j TITLE OF INVENTION:

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 18.8; DB 2;
Pred. No. 9.7;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: Virginia
ZIP: 22314
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" DS/HD
COMPUTER: 18M compatible
COMPUTER: 3.5" DS/HD
COMPUTER: 18M compatible
COMPUTER: Nordperfect
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
FILING DATE: August 12, 1993
APPLICATION NUMBER: US/08/105,169B
CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: B, 1992
ATTORNEY/AGENT INPORMATION:
NAME: William P. Berridge
REFERENCE/DOCKET NUMBER: WPB 28835
TELEPHONE: (703) 836-6400
TELEPHONE: (703) 836-2787
INPORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 268 bases

"WINCOLLING AND SEG ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Mycobacterium intracellulare
29 ACCGATGACGTCGCCGGTGACG 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29 Acceaceacerreceereace 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85.5%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 90.9<sup>5</sup>
"atches 20, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; LOCATION: 461-728
; IDENTIFICATION METHOD:
; OTHER INFORMATION:
US-08-105-168B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POSITION IN GENOME:
CHROMOSOME/SEGMENT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANTI-SENSE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
US-08-698-948-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PATEUR NO. 52898185

PATEUR NO. 52898185

RABELLANT: MABLIAT et al.

TITLE OF INVENTION: DNA FRACHENTS OF MYCCOBACTERIA, AMPLIFICATION
TITLE OF INVENTION: DNA FRACHENTS OF MYCCOBACTERIA, AMPLIFICATION
TITLE OF INVENTION: MYCOBACTERIA

CONTRESSOURCES: 23
CORRESSOURCES: 23
CORRESSOURCES SETIMATION: MYCOBACTERIA

NUMBER OF SEQUENCES: 23
CORRESSOURCE ADDRESSEE: 011ff & Berridge
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria, SOFFWA: DS SOUTH
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria, MS DS 3.1

COMPUTER READABLE FORM:
WORDDETE: 18M compatible
COMPUTER: 18M compatible
CLASSIFICATION NUMBER: 1870
RESTSTANTION NUMBER: 187
                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                               Query Match 85.5%; Score 18.8; DB 2; Length 268; Best Local Similarity 90.9%; Pred. No. 9.7; Matches 20; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 85.5%; Score 18.8; DB 2; Length 268; Best Local Similarity 90.9%; Pred. No. 9.7; Matches 20; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ANTI-SENSE:
ORIGINAL SOURCE:
ORGANISM: Mycobacterium microti
                                                                                                                                                                                 1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                    29 ACCGATGACGTCGCCGGTGACG 50
                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/08105168B
Patent No. 5589585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTIFICATION METHOD:
OTHER INFORMATION:
US-08-105-168B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            461-728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                  RESULT 6
US-08-105-168B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN:
                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                윱
```

Gaps

ö

1 ACCGATAACGTTGCCGGTGACG 22

```
TITLE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DETTILE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DETTILE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DETTILE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DETTILE OF INVENTION: MYCOBACTERIA

NUMBER OF SEQUENCES: 23
ADDRESSEE: Oliff & Berridge
STREET: 700 SOUTH Weshington Street, Suite 300
CITY: Alexandria,
STRATE: Virginia
STREET: 100 SOUTH Weshington Street, Suite 300
CITY: Alexandria,
STRATE: Virginia
STREET: 100 SOUTH Weshington Street, Suite 300
CITY: Alexandria,
STRATE: Virginia
STREET: 100 SOUTH Weshington Street, Suite 300
CITY: Alexandria,
STRATE: Virginia
STRATE: Virginia
STRATE: Virginia
STRATE: Virginia
STRATE: Virginia
STRATE: Virginia
STRATE: Wordprible
COMPUTER READALE FORM:
MEDIUM TYPE: 35 = DS-MBS
STREET: August 16, 1996
CLASSIFICATION DATA:
APPLICATION NUMBER: US/08/68, 948
FILING DATE: August 12, 1993
PRIOR APPLICATION NUMBER: US/08/56
PRIOR APPLICATION NUMBER: US/08/56
PRIOR APPLICATION NUMBER: WB 28835A
TRIBNOANE: August 12, 1992
ATTORNEY/AGENT INPORMATION:
TELECOMMUTCATION NUMBER: WB 28835A
TELECOMMUTCATION POR SEQ ID NO: 2:
SECOURCE CHARACTERISTICS:
LINPORMATICS TELECOMMUTER: SEG DETTILES
TURNEY ALTORED TO NO: 2:
SECOURCE CHARACTERISTICS:
LINPORMATICS TO SEC DETTILES
TO NOT THE SECOURCE CHARACTERISTICS:
SECOURCE CHARACTERISTICS:
SECOURCE CHARACTERISTICS:
SECOURCE CHARACTERISTICS:
SECOURCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 5, Application US/08698948
Patent No. 5849901
GENERAL INFORMATION:
APPLICANT: MABILAT et al.
TITLE OF INVENTION: DNA FRAGMENTS OF MYCOBACTERIA, AMPLIFICATION
TITLE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 18.8; DB 2; Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 9.7;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ANTI-SENSE:
ORIGINAL SOURCE:
ORGANISM: Mycobacterium microti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29 Accearcacircacicacianos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
EDNESS: single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 90.9%;
Matches 20; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
1 LOCATION: 461-728
1 IDENTIFICATION METHOD:
1 OTHER INFORMATION:
US-08-698-948-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POSITION IN GENOME:
CHROMOSOME/SEGMENT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: lin
MOLECULE TYPE:
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-698-948-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                         DNA FRAGMENTS OF MYCOBACTERIA, AMPLIFICATION
PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DET
MYCOBACTERIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85.5%; Score 18.8; DB 2; Length 268; 90.9%; Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSER:
ADDRESSER:
ADDRESSER:
ADDRESSER:
ADDRESSER:
AITATE: 700 South Washington Street, Suite 300
CITY: Alexandria,
ZIP: 22314
Z214:
Z224:
COMPUTER:
MSDOS 3.1
SOFTWARE:
Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US, 1996
CLASSIFFCATION: DATA:
APPLICATION NUMBER: 08/105,168
FILING DATE: August 12, 1993
FILING DATE: August 12, 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: R9210094
FILING DATE: August 8, 1992
ATTORNEY/AGENT INFORMATION:
NAME: William P. Berridge
REGISTRATION NUMBER: 30, 024
RECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6400
TELEFAX: (703) 836-2707
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: Z68 base pairs
TELEGTH: Z68 base pairs
TENDREDICATIC aligner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29 Accdardaccircicciccidace 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANTI-SENSE:
ORIGINAL SOURCE:
ORGANISM: Mycobacterium bovis
Sequence 1, Application US/08698948
Patent No. 5849901
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/08698948; Patent No. 5849901; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: DNA (genomic) HYPOTHETICAL:
                                                                          APPLICANT: MABILAT et al.
TITLE OF INVENTION: DNA FR
TITLE OF INVENTION: PRIMER
TITLE OF INVENTION: MYCOBA
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Oliff & Belti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 90.99
Matches 20, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: 461-728
IDENTIFICATION METHOD:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-698-948-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-698-948-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
Sequence 23. Application US/0869898

Patent No. 584991

GENERAL INFORMATION:
APPLICANT: MABILIAT et al.
TITLE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DETTILE OF INVENTION: MYCOBACTERIA
INUBBRE, OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: Oliff & Berridge
STREET: 700 South Washington Street, Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 18.8; DB 2; Length 314; Pred. No. 9.8; 0; Mismatches 2; Indels (
           STREET: 700 South Washington Street, Suite 300 CITY: Alexandria,
                                                                                                                               COMPUTER READBLE FORM:
MEDIUM TYPE: 3.5" DS/HD
COMPUTER: IBM compatible
OPERATING SYSTEM: MS DOS 3.1
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
FILLING DATE: August 12, 1993
APPLICATION UNWBER: US/08/105,168B
CLASSIFICATION: 435
PRIOR APPLICATION ATA:
FILLING DATE: August 18, 1992
ATTORNEY/AGENT INFORMATION:
NAME: William P. Berridge
REGISTRATION NUMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB 28835
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION FOR SEQ 1D NO: 23:
INFORMATION FOR SEQ 1D NO: 23:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ANTI-SENSE:
ORIGINAL SOURCE:
ORGANISM: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52 Acceargacerceceeraace 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 314 base pairs
TYPE: nucleic acid
STRANDEDNESS: single-st
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 90.9
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; LOCATION: 438-751
; IDENTIFICATION METHOD:
; OTHER INFORMATION:
US-08-105-168B-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 22314
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           438-751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Alexandria,
STATE: Virginia
ZIP: 22314
                                                                                     Virginia
                                                           STATE: VALUE 22314
  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-698-948-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 11
US-08-105-168B-23
US-08-105-16BB-23
Sequence 23, Application US/08105168B
Patent No. 5589585
GENERAL INFORMATION:
TITLE OF INVENTION:
CORRESPONDENCE 23
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85.5%; Score 18.8; DB 2; Length 268; 90.9%; Pred. No. 9.7; tive 0; Mismatches 2; Indels
                                                  CORRESPONDENCE ADDRESS:
ADDRESSER:
ADDRESSER:
ADDRESSER:
ADDRESSER:
ADDRESSER:
ADDRESSER:
ADS South Washington Street, Suite 300
CITY: Alexandria,
ZTATE: Virginia
Z1P: 22314
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" DS/HD
COMPUTER: IBM compatible
OPERATING SYSTEM: MS DOS 3.1
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/698,948
FILING DATE: August 16, 1996
CLASSIFICATION: DATA:
APPLICATION NUMBER: 08/105,168
FILING DATE: August 12, 1993
FRIOR APPLICATION DATA:
APPLICATION NUMBER: RP9210094
FILING DATE: August 8, 1992
APPLICATION NUMBER: RP9210094
FILING DATE: August 10, 1992
APPLICATION NUMBER: RP9210094
FILING DATE: August 10, 1992
APPLICATION NUMBER: RP9210094
FILING DATE: August 10, 1992
APPLICATION NUMBER: 30, 024
FEEFRANCE/DOCKET NUMBER: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ANTI-SENSE:
ORIGINAL SOURCE:
ORGANISM: Mycobacterium intracellulare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29 ACCGACGACGTTGCCGGTGACG 50
TITLE OF INVENTION: MYCOBACTERIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 90.9
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; LOCATION: 461-728
; IDENTIFICATION METHOD:
; OTHER INFORMATION:
US-08-698-948-5
                       NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
```

ð

```
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Sequence 4, Application US/08473020A; Patent No. 5877273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 90.93
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: San Francisco
STATE: California
COUNTRY: U.S.A.
ZIP: 94111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , MOLECULE TYPE: CDNA
US-08-473-020A-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14
US-08-473-020A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 31, Application US/08473020A
Sequence 31, Application US/08473020A
PRICENT NO. 5877273
GENERAL INFORMATION:
APPLICANT: Hance, Allan J
APPLICANT: Levy-Frebault, Veronique
APPLICANT: Levy-Frebault, Veronique
APPLICANT: Grandchamp-Desraux, Bernard
TITLE OF INVENTION: Applications to the synthesis or detection of nucleic
TITLE OF INVENTION: application as immunogenic compositions.
NUMBER OF SEQUENCES: 31
CORRESPENDENCE ADDRESS:
ADDRESSEE: Walter H. Dreger
STREET: 4 Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85.5%; Score 18.8; DB 2; Length 314; 90.9%; Pred. No. 9.8; tive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                           ATTUCKEET AND ALL THE CONTINUES.

NAME: William P. Berridge
REGISTRATION NUMBER: 30,024
REPERENCE/DOCKET NUMBER: WPB 28835A
TELECOMMUNICATION INPORMATION:
TELEPHONE: (703) 836-6400
TELEFAX: (703) 836-2787
INPORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
LENGTH: 314 base pairs
TYPE: nucleic acid
STRANDEDNESS: single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Mycobacterium tuberculosis
COMPUTER: IBM COMPATION
COMPUTER: IBM COMPATION
SOFTHANG SYSTEM: MS DOS 3.1
SPILING DATE: August 16, 1996
CLASSIFFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/105,168
FILING DATE: August 12, 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR9210094
FILING DATE: August 8, 1992
ATTORNEY, AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52 Accelareacercecceereace 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
MYDTHFTICAL:
ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: 438-751
IDENTIFICATION METHOD:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 4 Embarcader
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
Matches 20; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-473-020A-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-698-948-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
GENERAL INFORMATION:
APPLICANT: Hance, Allan J
APPLICANT: Hance, Allan J
APPLICANT: Grandchamp-Desraux, Bernard
APPLICANT: Grandchamp-Desraux, Bernard
APPLICANT: Levy-Frebault, Veronique
APPLICANT: Grandchamp-Desraux, Bernard
APPLICANT: Grandchamp-Desraux, Bernard
APPLICANT: Grandchamp-Desraux, Bernard
APPLICANT: Grandchamp-Desraux, Brigitte
TITLE OF INVENTION: application to the synthesis or detection of nucleic TITLE OF INVENTION: application as immunogenic compositions.
TITLE OF INVENTION: application as immunogenic compositions.
CORRESPONDENCE ADDRESS:
ADDRESSEE: Walter H. Dreger
SIRRET: 4 Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 342;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/473,020A
FILING DATE: 06-7UN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/623,729
FILING DATE: 14-DEC-1990
ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Walter H
OPERATING SYSTEM: PC-LUOS/MS-LUOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/473,020A
FILING DATE: 06-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/623,729
FILING DATE: 14-DEC-1990
ATTORNEY/AGENT INFORMATION:
NAME: DEGGET, WALLET H
REGISTRATION NUMBER: A54435
TELEPHONE: (415) 781-1989
TELEPHONE: (415) 781-1989
TELEPHONE: (415) 781-1989
TELEPHONE: (415) 781-1989
TELEPHONE: (415) 781-1889
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85.5%; Score 18.8; DB 2; 90.9%; Pred. No. 9.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46 Accearcacirciccicitatics 67
```

ò

ô

Gaps

```
Score 18.8; DB 2; Length 350;
Pred. No. 9.9;
0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                           Search completed: May 4, 2006, 07:23:54 Job time: 49.5287 secs
                                                                                                                                                                                                                                                                              1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                        52 ACCGATGACGTCGCCGGTGACG 73
                                                                                                                                                                                 Query Match
Best Local Similarity 90.9%;
Matches 20; Conservative
                          FEATURE:

NAME/KEY:

LOCATION: 438-787

IDENTIFICATION METHOD:

OTHER INFORMATION:

US-08-105-1688-22
         MAP POSITION:
                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-105-168B-22

Sequence 22, Application US/08105168B

Sequence 22, Application US/08105168B

Patent No. 5589585

GENERAL INFORMATION:

APPLICANT: MABILAT et al.

TITLE OF INVENTION: DNA FRAGMENTS OF MYCOBACTERIA, AMPLIFICATION

TITLE OF INVENTION: MYCOBACTERIA

NUMBER OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:

ADDRESSEE: Oliff & Berridge

STREET: 700 South Washington Street, Suite 300

CITY: Alexandia,

STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                      Query Match 85.5%; Score 18.8; DB 2; Length 343; Best Local Similarity 90.9%; Pred. No. 9.9; Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5 "DS/HD
COMPUTER: BM compatible
COMPUTER: BM compatible
COMPUTER: BM compatible
COMPUTER: BM compatible
OPERATING SYSTEM: MS DOS 3.1
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
FILING DATE: August 12, 1993
APPLICATION NUMBER: US/08/105,168B
CLIASSIPFATION NUMBER: WS/08/105,168B
CLIASIPFATION NUMBER: FR9210094
FILING DATE: August 8, 1992
ATTORNEY/AGENT INFORMATION:
NAME: William P. Berridge
REGISTRATION NUMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB 28835
TELEPAN: (703) 836-6400
TELEPAN: (703) 836-6400
TELEPAN: (703) 836-5787
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
LENGTH: 350 base pairs
TYPE: nucleic acid
STRANDEDNESS: single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANTI-SENSE:
ORIGINAL SOURCE:
ORIGINAL Mycobacterium tuberculosis
STRAIN:
REGISTRATION NUMBER: 24190
REFERENCE/DOCKET NUMBER: A44435
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEPAX: (415) 398-3249
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 343 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
                                                                                                                                                                                                                                                                                                                                                                                                                                          47 ACCGATGACGTCGCCGGTGACG 68
                                                                                                                                                                                                                                                                                                                                                                                                              1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INDIVIDUAL ISOLATE:
POSITION IN GENOME:
CHROMOSOME/SEGMENT:
                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: CDNA
US-08-473-020A-4
                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

This Page Blank (uspto)

```
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ...
....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 4, Appli
Sequence 6, Appli
Sequence 7, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 3, Appli
Sequence 6, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 16, Appli
Sequence 16, Appli
Sequence 7, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 7, Appli
Sequence 2, Appli
Sequence 6, Appli
Sequence 7, Appli
Sequence 12, Appli
                                                                                     May 4, 2006, 07:24:16; Search time 328.736 Seconds (without alignments) 553.412 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                               Published Applications NA Main:*

1: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
3: /cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
4: /cgn2_6/ptodata/1/pubpna/USO9B_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/USO9B_PUBCOMB.seq:*
6: /cgn2_6/ptodata/1/pubpna/USO9B_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
8: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
10: /cgn2_6/ptodata/1/pubpna/USOB_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                              19587084
GenCore version 5.1.7
(c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-056-463-164
US-11-041-636-7
US-11-017-103-3
US-11-056-463-163
US-10-789-758-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-011-635A-5
US-10-304-616-3
US-10-304-616-3
US-10-011-635A-4
US-10-011-635A-4
US-10-304-616-4
US-10-399-164-3
US-10-333-448-3
US-10-333-448-3
US-10-333-448-3
US-10-899-771-26
US-10-899-771-26
                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-500-586-2
US-10-500-586-6
US-10-500-586-7
US-10-500-586-12
                                                                                                                                                                                                                                                              9793542 seqs, 4134689005 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                          - nucleic search, using sw model
                                                                                                                                                                                   1 accgataacgttgccggtgacg 22
                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                           seq length: 0
seq length: 200000000
                                                                                                                                                    US-10-789-758A-3
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
              Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match
                                                                                                                                                   Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                          OM nucleic
                                                                                                                                                                                                                                                                                                                         Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                      Database :
                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                               Searched:
                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Result
```

```
ö
                                                          26,12, A
3, Appl 1
3, Appl 1
3, Appl 1
1, Appl 1
16, Appl 1
16, Appl 1
28, Appl 1
9, Appl 1
7, Appl 1
11, Appl 1
11, Appl 1
11, Appl 1
26, Appl 1
27, Appl 1
28, Appl 1
3, Appl 1
3, Appl 1
3, Appl 1
4, Appl 1
5, Appl 1
5, Appl 1
6, Appl 1
7, Appl 1
8, Appl 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                              Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                 Sequence Sequence S
                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                        Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 22; DB 8; Length 22, 100.0%; Pred. No. 0.52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Oligonucleotide containing a CpG motif US-10-789-758-3
US-10-500-586-45
US-10-267-311-32
US-10-282-122A-26142
US-10-282-122A-26142
US-10-282-122A-28196
US-10-282-122A-28196
US-10-679-956-3
US-10-679-956-3
US-10-679-956-16
US-10-679-956-16
US-10-679-956-16
US-10-679-956-16
US-10-679-956-16
US-10-679-956-16
US-10-941-049-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-011-635A-5
Sequence 5, Application US/10011635A
Publication No. US20030003579A1
GENERAL INFORMATION:
APPLICANT: Kadowaki, No. US20030003579A1imitsu
APPLICANT: Liu, Yong-Jun
TITLE OF INVENTION:
TITLE OF INVENTION: Dendritic cells; Methods
FILE REFERENCE: DX01206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Cohen, Joe
APPLICANT: Cohen, Joe
APPLICANT: Garcon, Nathalie
APPLICANT: Garcon, Nathalie
APPLICANT: Garcon, Nathalie
APPLICANT: Garcon, Nathalie
APPLICANT: Vaccine
FILE REFERENCE: B45187
CURRENT APPLICATION NUMBER: US/10/789,758
CURRENT APPLICATION NUMBER: US/10/018,704
PRIOR FILING DATE: 2002-03-07
PRIOR FILING DATE: 2000-06-23
PRIOR FILING DATE: 2000-06-23
PRIOR FILING DATE: 1999-06-29
NUMBER OF SEQ ID NOS: 7
SEQ ID NO 3
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 3, Application US/10789758 Publication No. US20050002958A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Artificial Sequence
        Query Match
Best Local Similarity 100.0
Matches 22, Conservative
      604
888
1623
1623
11623
11623
11623
11623
11623
11623
1172
11947
11947
11947
1130
121130
121130
121130
121130
121130
121130
    US-10-789-758-3
    LENGTH: 22
```

```
NAME/KEY: misc feature; LOCATION: (1). (30); LOCATION: (1). (30); OTHER INFORMATION: Yamamoto, et al. (1994) Jpn. J. Cancer Res. 85:775-779. US-10-011-635A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Yamamoto, et al. (1994) Jpn. J. Cancer Res. 85:775-779.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                       OTHER INFORMATION: Description of Artificial Sequence: Synthetic OTHER INFORMATION: oligonucleotide AAC-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 30;
                                                                                                                                                                                                                                           100.0%; Score 22; DB 9; Length 30; 100.0%; Pred. No. 0.53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6, Application US/10011635A

Publication No. US20030003579A1

GENERAL INFORMATION:

APPLICANT: Kadowaki, No. US20030003579A1imitsu

APPLICANT: Liu, Yong-Jun

TITLE OF INVENTION: Dendritic cells; Methods

FILE REFERENCE: DX01206

CURRENT APPLICATION NUMBER: US/10/011,635A

CURRENT FILING DATE: 2001-10-22

PRIOR APPLICATION NUMBER: 60/243,232

PRIOR APPLICATION NUMBER: 60/243,332

PRIOR APPLICATION NUMBER: 60/243,332

NUMBER OF SEQ ID NOS: 6

SEQ ID NO 6

LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/10011635A

Publication No. US20030003579A1

GENERAL INFORMATION:
GENERAL INFORMATION:
TYPLE OF INVENTION: Dendritic cells; Methods

TYPLE OF INVENTION: Dendritic cells; Methods

TYPLE REPRENCE: DX01206

CURRENT APPLICATION NUMBER: US/10/011,635A

CURRENT FILING DATE: 2001-10-22

PRIOR FILING DATE: 2000-10-24

NUMBER OF SEQ ID NOS: 6

SOFTWARE: PATENTIN VENERON 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 18.8;
Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 Accearaccerecereace 22
                                                                                                                                                                                                                                                                                                                                                  1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                           1 Accentacerreceereace 22
                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85.5%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: Artificial Sequence
                                                                                             TYPE: DNA ORGANISM: Artificial Sequence
                     SOFTWARE: Patentin Ver. 3.2
SEQ ID NO 3
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 90.9
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                     Conservative
    NUMBER OF SEQ ID NOS: 5
                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 22; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-011-635A-4
                                                                                                                                                                                                            US-10-496-501A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 4
LENGTH: 30
                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: TOMIZAMA, HIDEVUKI
APPLICANT: TOMIZAMA, HIDEVUKI
APPLICANT: TOMIZAMA, HIDEVUKI
APPLICANT: TOMIZAMA, HIDEVUKI
APPLICANT: YAMAGA, TAKASHI
AITLE OF INVENTION: NONHUMAN ANIMAL UNRESPONSIVE TO IMMUNOPOTENTIATING SYNTHETIC
TITLE OF INVENTION: COMPOUND
TITLE OF INVENTION: COMPOUND
CURRENT APPLICATION NUMBER: US/10/496,501A
CURRENT FILING DATE: 2004-05-21
PRIOR FILING DATE: 2004-05-21
PRIOR PLICATION NUMBER: PCT/JP02/12234
PRIOR PLICATION NUMBER: US 2001-358295
PRIOR FILING DATE: 2001-11-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                         NAME/KEY: misc_feature; LOCATION: (1)..(30)
COTHER INFORMATION: Yamamoto, et al. (1994) Jpn. J. Cancer Res. 85:775-779.
US-10-011-635A-5
                                                                                                                                                                                                                                                            OTHER INFORMATION: Yamamoto, et al. (1994) Jpn. J. Cancer Res. 85:775-779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 22; DB 6; Length 30; 100.0%; Pred. No. 0.53;
                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
100.0%; Score 22; DB 5; Length 30;
Best Local Similarity 100.0%; Pred. No. 0.53;
Matches 22; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 3, Application US/10304616
Publication No. US20030138413A1
GENERAL INFORMATION:
APPLICANT: Schering Corporation
TITLE OF INVENTION: METHODS FOR TREATING CANCER
FILE REFERENCE: SF01482
CURRENT APPLICATION NUMBER: US/10/304,616
CURRENT PILING DATE: 2002-11-26
NUMBER OF SEQ ID NOS: 5
SOUTWARE: Patentin version 3.1
SEQ ID NO 3
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
CURRENT APPLICATION NUMBER: US/10/011,635A
CURRENT FILING DATE: 2001-10-22
PRIOR APPLICATION NUMBER: 60/243,232
PRIOR FILING DATE: 2000-10-24
NUMBER OF SEQ ID NOS: 6
SOFTWARE: Patentin version 3.1
SEQ ID NO 5
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 Accearaacerieceegreace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Application US/10496501A Publication No. US20050235372A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 100.0
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -10-496-501A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-304-616-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

ô

```
; TYPE: DNA; ORGANISM: Homo sapien US-10-379-164-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                 US-10-233-902-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                         ò
                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                   ö
                                                                                          FEATURE:

NAME/KEY: misc feature

LOCATION: (1)...(30)

CTHER INFORMATION: Yamamoto, et al. (1994) Jpn. J. Cancer Res. 85:775-779.

US-10-011-635A-6
                                                                    INFORMATION: Yamamoto, et al. (1994) Jpn. J. Cancer Res. 85:775-779
                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
0
                                                                                                                                                                                                                                Query Match 85.5%; Score 18.8; DB 5; Length 30; Best Local Similarity 90.9%; Pred. No. 21; Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 85.5%; Score 18.8; DB 6; Length 30; Best Local Similarity 90.9%; Pred. No. 21; Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/10304616
Publication No. US20030138413A1
GENERAL INFORMATION:
APPLICANT: Schering Corporation
ITILE OF INVENTION: METHODS FOR TREATING CANCER
FILE REFERENCE: SF01482
CURRENT APPLICATION NUMBER: US/10/304,616
CURRENT FILING DATE: 2002-11-26
NUMBER OF SEQ ID NOS: 5
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OSTIO-1979-104-3

DEDIGATION ON US20030161834A1

GENERAL INFORMATION:

APPLICANT: Friede, Martin

APPLICANT: Garand, Mathalie

APPLICANT: Gerard, Cathalie

APPLICANT: Gerard, Cathalie

APPLICANT: Gerard, Cathalie

TITLE OF INVENTION: Vaccines

FILE REFERENCE: B45181-1D1

CURRENT APPLICATION NUMBER: US/10/379,164

CURRENT FILING DATE: 2003-03-03

PRIOR FILING DATE: 2000-10-18

PRIOR FILING DATE: 2000-04-04

PRIOR FILING DATE: 2000-04-04

PRIOR FILING DATE: 1999-04-19

PRIOR FILING DATE: 1999-04-19

PRIOR FILING DATE: 1999-04-19

PRIOR FILING DATE: 1999-04-19

NUMBER OF SEQ ID NOS: 5

SOFTWARE: FESESEQ for Windows Version 4.0

SEQ ID NO 3

LENGTH: 30
                                                                                                                                                                                                                                                                                                                                 1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                          1 Accelaracerceceerace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 acceargacerceceergace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; FEATURE:
; OTHER INFORMATION: oligonucleotide
US-10-304-616-4
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-304-616-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-379-164-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 4
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                 ઠ
                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
```

```
Sequence 3, Application US/10399356

Publication No. US20040047869A1

GENERAL INFORMATION:
APPLICANT: GARCON, NATHALIE
APPLICANT: CATHERINE MARIE GHISLAINE GERARD
APPLICANT: CATHERINE MARIE GHISLAINE GERARD
APPLICANT: JEAN STEPHENNE
TITLE OF INVENTION: INMUNOSTIMULATORY LOIGONUCLEOTIDE AND A TOCOL
TITLE OF INVENTION: IMMUNOSTIMULATORY LOIGONUCLEOTIDE AND A TOCOL
TITLE OF INVENTION: IMMUNOSTIMULATORY LOIGONUCLEOTIDE AND A TOCOL
TITLE OF INVENTION NUMBER: US/10/399,356
CURRENT PELING DATE: 2003-04-15
PRIOR FILING DATE: 2001-10-16
PRIOR FILING DATE: 2000-10-18
PRIOR FILING DATE: 2000-10-18
PRIOR FILING DATE: 2000-10-18
PRIOR FILING DATE: 2000-10-18
SEQ ID NO 3
SEQ ID NO 3
LENGTH: 30
PRIOR FILING DATE: LOIGH Windows Version 4.0
SEQ ID NO 3
SEQ ID NO 3
SEQ ID NO 3
SEDENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                        Gaps
                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ) OTHER INFORMATION: synthetic immunostimulatory oligonucleotide US-10-233-902-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Nucleotides based on bacterial sequences; OTHER INFORMATION: comprising dinucleotide CpB repeats US-10-399-356-3
  6; Length 30;
                                                        2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
     8
Query Match

85.5%; Score 18.8; D

Best Local Similarity 90.9%; Pred. No. 21;

Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Claire Ashman
APPLICANT: James Scott Crowe
APPLICANT: James Scott Crowe
APPLICANT: Jonathan Henry Ellis
APPLICANT: Jonathan Henry Ellis
TITLE OF INVENTION: WACCINE
FILE REFERENCE: P64355US
CURRENT APPLICATION NUMBER: US/10/233,902
CURRENT FILING DATE: 2002-09-03
NUMBER OF SEQ ID NOS: 25
SOFTWARE: PESESEQ for Windows Version 4.0
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 18.8;
Pred. No. 21;
                                                                                                              1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                1 ACCGATGACGTCGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 Accelracerceceeraace 22
                                                                                                                                                                                                                                                                                                ; Sequence 7, Application US/10233902
; Publication No. US20030194391A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 90.9%;
Matches 20; Conservative
```

ઠ

```
RESULT 13

US-10-899-771-26

Sequence 26, Application US/10899771

Sequence 26, Application US/10899771

Publication No. US20050031638A1

GENERAL INFORMATION:

APPLICANT: Dalemans, Wilfried L.J.

APPLICANT: Gerard, Catherine Marie Ghislaine

TITLE OF INVENTION: Compositions Comprising Human Papilloma Virus Proteins

TITLE OF INVENTION: and Fusion Proteins Adjuvanted with a CpG Oligonucleotide

TITLE REPERENCE: B45124

CURRENT APPLICATION NUMBER: US/10/899,771

CURRENT APPLICATION NUMBER: DCT/EP98/08563

PRIOR PILING DATE: 1998-12-18

PRIOR FILING DATE: 1998-12-18

PRIOR FILING DATE: 1997-12-24

NUMBER: OF SEQ ID NOS: 28

SOFTWARE: FeatSEQ for Windows Version 3.0

SEQ ID NO 26

LENGTH: 30

"LENGTH: 30

"DESC ID NO 26

"LENGTH: 30

"DESC ID NO 26

"DESC ID N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/10894655

Bublication No. US20050054601A1

GENERAL INFORMATION:
APPLICANT: Magner, Hermann
APPLICANT: Lipford, Grayson B.
TITLE OF INVENTION: PHARMACUTICAL COMPOSITION COMPRISING A POLYNUCLEOTIDE AND
TITLE OF INVENTION: PHARMACUTICAL COMPOSITION COMPRISING A POLYNUCLEOTIDE AND
TITLE OF INVENTION: OPTIONALLY AN ANTIGEN ESPECIALLY FOR VACCINATION
FILE REPERENCE: Clo41.700050302
CURRENT APPLICATION NUMBER: US/10/894,655
CURRENT APPLICATION NUMBER: US 09/355,254
PRIOR PILING DATE: 2000-02-22
PRIOR APPLICATION NUMBER: PCT/EP98/00367
PRIOR PILING DATE: 1998-01-23
NUMBER OF SEQ ID NOS: 27
SOUTHARRE: Patentin Version 3.2
                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 30;
                                                                      Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indelg
                                                                                                                                      Indels
                                                                   85.5%; Score 18.8; DB 8; 90.9%; Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 18.8; DB 8;
Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                     1 ACCGATGACGTCGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 Acceargacerceceercace 22
                                                                                                                                                                                                  1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 90.9%;
Matches 20; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Synthetic US-10-899-771-26
                                                                                                                                   20; Conservative
                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 4
      US-10-478-188-3
                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                      ö
                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 85.5%; Score 18.8; DB 7; Length 30; 90.9%; Pred. No. 21; tive 0; Mismatches 2; Indels
      DB 7; Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Nucleotides based on bacterial sequences
OTHER INFORMATION: comprising dinucleotide CpG repeats
                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/10478188
PUBLICATION NO. US20050019340A1
GENERAL INFORMATION:
APPLICANT: GERARD, CATHERINE MARIE GHISLAINE
APPLICANT: GERARD, CATHERINE MARIE GHISLAINE
APPLICANT: STEPHENNE, JEAN
TITLE OF INVENTION: VACCINES
FILE REFERENCE: B45245
CURRENT PILING DATE: 2003-11-18
PRIOR APPLICATION NUMBER: OFT/EP01/11984
PRIOR FILING DATE: 2001-10-16
PRIOR FILING DATE: 2000-10-18
PRIOR FILING DATE: 2000-10-18
PRIOR APPLICATION NUMBER: GB 0025573.7
PRIOR APPLICATION NUMBER: GB 0025574.5
PRIOR APPLICATION NUMBER: GB 0025574.5
PRIOR APPLICATION NUMBER: GB 0025574.5
PRIOR APPLICATION NUMBER: US 09/690,921
Query Match 85.5%; Score 18.8; D
Best Local Similarity 90.9%; Pred. No. 21;
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Dalton, Colin Clive
APPLICANT: Baseman, Richard Lewis
APPLICANT: Garcon, Nachalie
TITLE OF INVENTION: Vaccines
FILE REFERENCE: B45229
CURRENT APPLICATION NUMBER: US/10/333,448
CURRENT FILING DATE: 2003-01-21
PRIOR FILING DATE: 2001-07-18
PRIOR FILING DATE: 2001-07-18
PRIOR FILING DATE: 2000-07-21
NUMBER OF SEQ ID NOS: 3
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 5
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Cpg oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                      1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                               1 Accearcacerceceerace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 Acceargacerceceereace 22
                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/10333448 Publication No. US20040049150A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                  US-10-333-448-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-333-448-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 3
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ő
                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 30;
                                         Query Match 85.5%; Score 18.8; DB 9; Length 30; Best Local Similarity 90.9%; Pred. No. 21; Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                            RESULT 15
US-11-056-443-164
; Sequence 164, Application US/11056463
; Publication No. US20050169888A1
; GENERAL INFORMATION:
; APPLICANT: Hartmann, Gunther
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Krieg, Arthur
; TITLE OF INVENTION: Methods Related to Immunostimulatory; TITLE OF INVENTION: Nucloic Acid-Induced Interferon
; TITLE OF INVENTION: Nucloic Acid-Induced Interferon
; FILE REFERENCE: C1039.700440801
; CURRENT APPLICATION NUMBER: US/11/056,463
; CURRENT FILING DATE: 2000-02-11
; PRIOR APPLICATION NUMBER: US 60/156,147
; PRIOR FILING DATE: 1999-09-27
; PRIOR FILING DATE: 1999-09-27
; RIOR FILING DATE: 1999-09-27
; NUMBER OF SEQ ID NOS: 169
; SOFTWARE: FRSEED for Windows Version 3.0
; SEQ ID NO 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 85.5%; Score 18.8; DB 10; Best Local Similarity 90.9%; Pred. No. 21; Matches 20; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) OTHER INFORMATION: Synthetic Oligonucleotide US-11-056-463-164
                                                                                                                                  1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
US-10-894-655-4
                                                                                                                                       ò
                                                                                                                                                                                 g
```

Search completed: May 4, 2006, 09:01:08 Job time : 329.736 secs

1 ACCGATGACGTCGCCGGTGACG 22

ઠે

셤

This Page Blank (uspto)

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Database :

```
Sequence 82578, A Sequence 12, Appli Sequence 192, Appli Sequence 192, Appli Sequence 28704, A Sequence 28704, A Sequence 28704, A Sequence 2059, Appli Sequence 5897, Appli Sequence 569678, Sequence 111, Appli Sequence 663, Appli Sequence 67, Appli Sequence 67, Appli Sequence 67, Appli Sequence 67, Appli Sequence 31, Appli Appli Sequence 31, Appli Appli Sequence 31, Appli Appli Sequence 31, Appli Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 1

US-10-741-720A-25

Sequence 25, Application US/10741720A

BUBLICATION NO. US20060058254A1

GENERAL INPORMATION:

APPLICANT: DIMA, Dino

APPLICANT: FEARON, Karen L.

APPLICANT: MARSHALL, Jason

TITLE OF INVENTION: IMMUNOSTIMILATORY SEQUENCE

TITLE OF INVENTION: IMMUNOSTIMILATORY SEQUENCE

TITLE OF INVENTION: OLIGONUCLEOTIDES AND METHODS OF USING THE SAME

TILLE REFERENCE: 377882003300

CURRENT FILING DATE: 2003-12-18

PRIOR PLICATION NUMBER: US 60/436,122

PRIOR PLILING DATE: 2003-12-23

PRIOR FILING DATE: 2003-02-13

PRIOR FLILING DATE: 2003-02-13

PRIOR PLING DATE: 2003-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
US-10-932-182A-127255

US-10-932-182A-9319

US-10-932-182A-92518

US-10-932-182A-92578

US-11-122-96-2

US-11-122-36-1

US-11-122-36-1

US-11-122-36-1

US-11-122-36-1

US-11-123-36-1

US-11-123-36-1

US-10-932-182A-28704

US-10-932-182A-28704

US-10-932-182A-28704

US-10-932-182A-2859

US-10-932-182A-5807

US-10-932-182A-5807

US-09-925-065A-569678

US-10-932-182A-5807

US-09-925-065A-569678

US-11-212-443-1

US-10-932-182A-663

US-11-122-443-1

US-10-932-182A-663

US-11-122-443-3

US-11-212-443-3

US-11-212-138A-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 22; DB 12;
100.0%; Pred. No. 0.0061;
vative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ) OTHER INFORMATION: Synthetic construct US-10-741-720A-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ACCGATAACGTTGCCGGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCGATAACGTTGCCGGTGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22; Conservative
                                                                                1041
3690
3690
3690
13449
25
25
25
26
405
405
405
531
531
1180
1180
1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 22, Conserv
             TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGIH:
               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Appli
Sequence 78079, A
Sequence 78079, A
Sequence 5, Appli
Sequence 348, App
Sequence 348, App
Sequence 127255,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 25, Appl
Sequence 92, Appl
Sequence 7, Appli
Sequence 538356,
Sequence 538357,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 947, App
Sequence 947, App
                                                                                                                                                                         May 4, 2006, 08:17:52 ; Search time 502.08 Seconds (without alignments) 178.449 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Published Applications NA New:*

1: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq1:*
2: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
3: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
4: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
5: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
6: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
7: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
7: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
8: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
9: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq:*
11: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
12: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
13: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
14: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
15: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
16: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
16: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
16: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
16: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
18: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
19: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
19: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
19: $IDS5/ptodata/2/pubpna/USOB NEW PUB.seq2:*
                                 GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 US-10-741-720A-25
2 US-10-741-720A-25
2 US-10-741-720A-92
0 US-10-925-065A-538356
US-09-925-065A-538356
US-09-925-065A-538357
1 US-10-932-182A-947
3 US-10-932-182A-947
4 US-10-932-182A-78079
US-10-932-182A-78079
US-10-932-182A-78079
US-10-932-182A-348
US-10-932-182A-348
US-10-932-182A-348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            9306428 segs, 2036268586 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                       1 accgataacgttgccggtgacg 22
                                                                                                                                  - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                   IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                 US-10-789-758A-3
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30
585
1203
1203
1247
1428
1428
1488
1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110::
111::
112::
115::
116::
116::
116::
```

Sequence

ö

Gaps

; 0

16.2 16.2 16.2 16.2 16.2 16.2 16.2 16.2

υu

υU

Result

Š.

```
publication No. US20040181048A1
publication No. US20040181048A1
general information.
Publication No. US20040181048A1
general information.
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Identification and Mapping of Single
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome
FILE REFERENCE: 10827.135
CURRENT APPLICATION NUMBER: US 60/25,065A
CURRENT PILING DATE: 2001-08-08
PRIOR APPLICATION NUMBER: US 60/22,147
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR PILING DATE: 2000-11-20
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR APPLICATION NUMBER: US 60/261,766
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR PELING DATE: 2001-01-16
PRIOR PILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-01-16
PRIOR PRIOR FILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 73.6%; Score 16.2; D
Best Local Similarity 85.7%; Pred. No. 19;
Matches 18; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             304 ACCGATAAAGTTGGCGGTTAC 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ACCGATAACGTTGCCGGTGAC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
CORGANISM: Homo sapiens
US-09-925-065A-538356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
US-09-925-065A-538357/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-925-065A-538357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                         JOURGEAL INFORMATION, DINO, APPLICANT: DINA, DINO, APPLICANT: PEARON, Karen L. APPLICANT: MASCHALL, Jason APPLICANT: MASCHALL, Jason TITLE OF INVENTION: IMMUNOSTIMULATORY SEQUENCE TITLE OF INVENTION: OLICOMOUCLECTIDES AND METHODS OF USING THE SAME FILE REFERENCE: 377882003300 CURRENT FILING DATE: 2003-12-18 PRIOR APPLICATION NUMBER: US 60/436,122 PRIOR APPLICATION NUMBER: US 60/447,885 PRIOR FILING DATE: 2003-12-18 PRIOR PILING DATE: 2003-05-01 PRIOR PLILING DATE: 2003-05-01 PRIOR PILING DATE: 2003-05-01 NUMBER OF SEQ ID NOS: 227 SOFTWARE: PSECS OF WINDOWS VERSION 4.0 SEQ ID NOS: 227 LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: synthetic immunostimulatory oligonucleotide US-10-469-561-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 90.9%; Pred. No. 0.51;
Matches 20; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
100.0%; Score 22; DB 12; Length 30;
Best Local Similarity 100.0%; Pred. No. 0.0061;
Matches 22; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 7, Application US/10469561
Publication No. US20050260216A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Claire Ashman
APPLICANT: James Scott Crowe
APPLICANT: Jonathan Henry Bliss
APPLICANT: Alan Peter Lewis
TITLE OF INVENTION: VACCINE
FILE REFERENCE: P64355USW
CURRENT APPLICATION NUMBER: US/10/469,561
CURRENT FILLING DATE: 2003-08-29
NUMBER OF SEQ ID NOS: 25
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 7
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Synthetic construct US-10-741-720A-92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                          Sequence 92, Application US/10741720A Publication No. US20060058254A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 Accearaacerrecceereace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 Acceargacerceceeraace 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: unknown
                                                   RESULT 2
US-10-741-720A-92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-469-561-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
```

Gaps

ö

Indels

Length 585;

DB 7;

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
Sequence 538357, Application US/09925065A; Bequence 538357, Application WS/09925065A; Bublication No. US20060181048A1
GENERAL INFORMATION:
JAPPLICANT: Wang, David G.
TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome TITLE OF INVENTION: Nucleotide Polymorphisms in the Human Genome TITLE OF INVENTION: NUMBER: US/09/925,065A
CURRENT APPLICATION NUMBER: US 60/252,147
FRIOR PEDICATION NUMBER: US 60/243,096
PRIOR APPLICATION NUMBER: US 60/252,147
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR APPLICATION NUMBER: US 60/250,092
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2000-11-30
PRIOR FILING DATE: 2001-01-16
PRIOR FILING DATE: 2001-05-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73.6%; Score 16.2; DB 7; Length 585; 85.7%; Pred. No. 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              304 ACCGATAAAGTTGGCGGTTAC 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ACCGATAACGTTGCCGGTGAC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 85.7°
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

US-09-925-065A-538356/C

```
US-10-932-182A-78079/c
                                                                                                                                                                                                                                                                                                                     1247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                             LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-93-182A-947

Sequence 947, Application US/10932182A

Sequence 947, Application US/10932182A

Publication No. US20060046253A1

GENERAL INFORMATION:
APPLICANT: NAKAO, YOSHIHIRO
APPLICANT: KODAMA, YUKKO
APPLICANT: KODAMA, YUKKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: PILIMCA, TOWOKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANTI ASHIKARI
APPLICANTI AS
                Sequence 947, Application US/10932182A

Publication No. US20060046253A1

Fublication No. US20060046253A1

GENERAL INFORMATION:

APPLICANT: NAKAO, YOSHIHIRO

APPLICANT: KODAWA, YUKIKO

APPLICANT: FUJIWIRA, TOSHIHIKO

TITLE OF INVENTION: METHODS FOR ANALYZING GENES OF INDUSTRIAL YEASTS

FILE REPRENCE: 030685-043

CURRENT APPLICATION NUMBER: US/10/932,182A

CURRENT FILING DATE: 2004-09-02

NUMBER OF SEQ ID NOS: 197023

SOFTWARE: Patentin version 3.3

SEQ ID NO 947

LENGTH: 1203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 11; Length 1203;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/11147763
Publication No. US20060078909A1
GENERAL INFORMATION:
APPLICANT: Stinivasan, Maithreyan
APPLICANT: Reifler, Michael
TITLE OF INVENTION: Sulfurylase-Luciferase Fusion Proteins
FILE REFERENCE: 21465-564
CURRENT APPLICATION NUMBER: US/11/147,763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 73.6%; Score 16.2; DB 11; Best Local Similarity 85.7%; Pred. No. 19; Matches 18; Conservative 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 73.6%; Score 16.2; D
Best Local Similarity 85.7%; Pred. No. 19;
Matches 18; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Saccharomyces pastorianus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Saccharomyces pastorianus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 CCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     71 CGGATAACGTTTCCGGTGATG 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 CCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-932-182A-947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-932-182A-947
US-10-932-182A-947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-11-147-763-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-932-182A-78079/C
US-10-932-182A-78079/C
Sequence 78079, Application US/10932182A
PUblication No. US20060046253A1
GENERAL INFORMATION:
APPLICANT: NAKAWURA, NORIHISA
APPLICANT: RODAMA, YUKIKO
APPLICANT: RODAMA, YUKIKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, 1008HIHIKO
APPLICANT: ASHIKARI, 1008HIHIKO
APPLICANT: ASHIKARI, 1008HIHIKO
CURRENT PILING DATE: 2004-09-02
NUMBER OF SEQ ID NOS: 197023
SOFTWARE: Patentin version 3.3
SEQ ID NO 78079
MUNDEL OF TOTAL OF TOTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 78079, Application US/10932182A
Publication No. US20060046253A1
GENERAL INFORMATION:
APPLICANT: NAKAO, YOSHIHIRO
APPLICANT: KODAMA, YUKIKO
APPLICANT: KODAMA, YUKIKO
APPLICANT: FUJIMURA, TOMOKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, TOSHIHIKO
TITLE OF INVENTION: METHODS FOR ANALYZING GENES OF INDUSTRIAL YEASTS
FILE REFERENCE: 030685-043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 11; Length 1428;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 73.6%; Score 16.2; DB 18; Best Local Similarity 85.7%; Pred. No. 19; Matches 18; Conservative 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 73.6%; Score 16.2; D
Best Local Similarity 85.7%; Pred. No. 19;
Matches 18; Conservative 0; Mismatches
PRIOR APPLICATION NUMBER: US/10/154,515
PRIOR FILING DATE: 2005-06-07
PRIOR FILING DATE: 2002-05-23
PRIOR APPLICATION NUMBER: US/10/122,706
PRIOR PLING DATE: 2002-04-11
PRIOR PLING DATE: 2001-10-30
PRIOR FILING DATE: 2001-10-30
NUMBER OF SEC ID NOS: 31
SECTIVARY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/932,182A CURRENT FILING DATE: 2004-09-02 NUMBER OF SEQ ID NOS: 197023 SOFTWARE: Patentin version 3.3 SEQ ID NO 78079 LENGTH: 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: DNA
; ORGANISM: Bacillus stearothermophilus
US-11-147-763-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1026 Accearancearecearence 1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Saccharomyces pastorianus US-10-932-182A-78079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235 ccgarcacgcragcagardacd 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 CCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ACCGATAACGTTGCCGGTGAC 21
```

```
Sequence 348, Application US/10932182A

| Publication No. US20060046253A1 |
| Publication No. US20060046253A1 |
| GENERAL INFORMATION: |
| APPLICANT: NAKAO, YOSHIHISO |
| APPLICANT: NAKAO, YOSHIHISO |
| APPLICANT: ROBAMA, YUKIKO |
| APPLICANT: ASHIKARI, TOMOKO |
| APPLICANT: ASHIKARI, TOSHIHIKO |
| TITLE OF INVERTION: METHODS FOR ANALYZING GENES OF INDUSTRIAL YEASTS |
| FILE REFERENCE: 030685-043 |
| CURRENT APPLICATION NUMBER: US/10/932,182A |
| CURRENT FILING DATE: 2004-09-02 |
| NUMBER OF SEQ ID NOS: 197023 |
| SEQ ID NO 3486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-932-182A-127255

Sequence 127255, Application US/10932182A

Publication No. US20060046253A1

GENERAL INFORMATION:
APPLICANT: NAKAO, YOSHIHIRO
APPLICANT: NAKAO, YOSHIHIRO
APPLICANT: RODAMA, YUKIKO
APPLICANT: KUNIKAL, TOMOKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, TOSHIHIKO
APPLICANT: ASHIKARI, USHIHIKO
APPLICANT: ASHIKARI, USHIHIKO
APPLICANT: ASHIKARI, USHIHIKO
APPLICANT: ASHIKARI, USHIHIKO
CURRENT APPLICATION NUMBER: US/10/932,182A
CURRENT APPLICATION NUMBER: US/10/932,182A
CURRENT PILING DATE: 2004-09-02
NUMBER OF SEQ ID NOS: 197023
SOFTWARE: PRICENTIN VERSION 3.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 73.6%; Score 16.2; DB 11; Length 1812; Best Local Similarity 85.7%; Pred. No. 19; Matches 18; Conservative 0; Mismatches 3; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 71.8%; Score 15.8; E Best Local Similarity 89.5%; Pred. No. 32; Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 127255, Application US/10932182A, Publication No. US20060046253A1, GRNERAL INFORMATION:
APPLICANT: NAKAO, YOSHIHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1565 CTGAAACGTTGCGGGTGACG 1585
                                            1565 crchanaccircccccicacc 1585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: Saccharomyces pastorianus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: Saccharomyces pastorianus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 CCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 GATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATAACGTTACCGGTGAAG 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-932-182A-127255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-932-182A-127255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 127255
LENGTH: 25
                                                                                                                      RESULT 13
US-10-932-182A-348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-932-182A-348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                     g
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: NAKAO, YOSHIHIRO
APPLICANT: NAKAO, YOSHIHIRO
APPLICANT: KODAMA, YUKIKO
APPLICANT: KODAMA, YUKIKO
APPLICANT: KUJIMURA, TOMOKO
APPLICANT: ASHIKARI, TOSHIHIKO
ITTLE OF INVENTION: METHODS FOR ANALYZING GENES OF INDUSTRIAL YEASTS
FILE REFERENCE: 030685-043
CURRENT APPLICATION NUMBER: US/10/932,182A
CURRENT PILING DATE: 2000-05-02
NUMBER OF SEQ ID NOS: 197023
SOFTWARE: PACENTIN VERSION 3.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                 ö
                                                                                                 Length 1428;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1488;
                                                                                                                                                                                                                                                                                                                                                                    Sequence 5, Application US/11147763

Publication No. U920060078909A1

Publication No. U920060078909A1

Publication No. U920060078909A1

APPLICANT: Stinivasan, Maithreyan

APPLICANT: Stinivasan, Maithreyan

APPLICANT: Reifler, Michael

TITLE OF INVENTION: Sulfurylase-Luciferase Fusion Proteins

FILE REFERENCE: 21465-504

CURRENT APPLICATION NUMBER: US/11/147,763

CURRENT FILING DATE: 2005-06-07

PRIOR APPLICATION NUMBER: US/10/124,515

PRIOR PILING DATE: 2002-04-11

PRIOR PLICHG DATE: 2002-04-11

PRIOR PLICHG DATE: 2001-04-11

PRIOR PLICHG DATE: 2001-10-30

NUMBER OF SEQ ID NOS: 31

SOFTWARE: PatentIN Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3; Indels
                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 73.6%; Score 16.2; DB 11; Best Local Similarity 85.7%; Pred. No. 19; Matches 18; Conservative 0; Mismatches 3;
                                                                                            Query Match 73.6%; Score 16.2; DB 11; Best Local Similarity 85.7%; Pred. No. 19; Matches 18; Conservative 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 73.6%; Score 16.2; DB 18; Best Local Similarity 85.7%; Pred. No. 19; Matches 18; Conservative 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 348, Application US/10932182A, Publication No. US20060046253A1, GENERAL INFORMATION:
                                                                                                                                                                                                                                                   1026 ACCGATAACCATGCCAGTGAC 1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: Saccharomyces pastorianus
                       j ORGANISM: Saccharomyces pastorianus
US-10-932-182A-78079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         553 ccdarcacdcrodcodroacd 573
                                                                                                                                                                                                   1 ACCGATAACGTTGCCGGTGAC 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 CCGATAACGTTGCCGGTGACG 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA; ORGANISM: Escherichia coli
US-11-147-763-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 12
US-10-932-182A-348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-932-182A-348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 348
LENGTH: 1812
                                                                                                                                                                                                                                                                                                                          RESULT 11
US-11-147-763-5
TYPE: DNA
                                                                                                                                                                                                                                                   සු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                   ઠ
```

ô

ô

```
## APPLICANT: NAKAMURA, NORIHISA

### APPLICANT: KODAMA, YUKIKO

### APPLICANT: KODAMA, YUKIKO

### APPLICANT: PUJINURA, TOOOKO

### APPLICANT: PUJINURA, TOOKHIKO

### TITLE OF INVENTION: METHODS FOR ANALYZING GENES OF INDUSTRIAL YEASTS

### TITLE OF INVENTION: METHODS FOR ANALYZING GENES OF INDUSTRIAL YEASTS

### TITLE OF INVENTION: METHODS FOR ANALYZING GENES OF INDUSTRIAL YEASTS

### CURRENT APPLICANTON NUMBER: US/10/932,182A

### CURRENT APPLICATION NUMBER: 2004-09-02

### NUMBER OF SEQ ID NOS: 197023

### SEQ ID NO 127255

### CURRENT PILING DATE: 2004-09-02

### SEQ ID NO 127255

### ORGANISM: Saccharomyces pastorianus

### ORGANISM: Saccharomyces

### ORGANISM: T
```

This Page Blank (uspto)

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 16-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 08-AUG-2001
                                                                                                                                                     Sequence
Immunosti
Sequence
                                                                                                         Sequence
Sequence
Sequence
                                                                                                                                                                                                                     Sequence
Sequence
                                                                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
                                                              Sequence
                                                                                                                                                                                                                                                                                                                                 Sequence
                                            Sequence
                                                                                          Sequence
                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                AX135634 S
AX195409 S
AX355409 S
AX655430 S
AX665439 S
AX67728 S
AX547629 S
AX547629 S
AX104910 S
AX10432 S
AX10432 S
AX10432 S
AX10432 S
AX104332 S
AX104332 S
AX104333 S
AX104333 S
AX104333 S
AX104333 S
AX10433 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
Unclassified.
L (bases 1 to 20)
Krieg, A.M., Kline, J., Klinman, D. and Steinberg, A.D.
Immunostimulatory nucleic acid molecules
Patent: US 6207646-A 12 27-MAR-2001,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20; DB 6; Length 20;
Pred. No. 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 26;
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .20
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12 from patent US 6207646.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ARIS4761 20 bp
Sequence 90 from patent US 6239116.
ARIS4761. GI:15122814
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
AX105236
AX135634
AX1356408
AX355409
AX468483
AX468483
AX468483
AX547628
AX547628
AX547628
AX547628
AX547628
AX54787
AX105257
AX105257
AX105257
AX105257
AX105257
AX105257
AX105257
AX105257
AX105257
AX105267
AX1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
Unclassified.
1 (bases 1 to 20)
Krieg, A.M. and Kline, J.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:14482949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGTCAACGTTGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGTCAACGTTGAGGGGGG
 AR140453.1
95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 95.00 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 1
AR140453
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
AR154761
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Microemul
Enhanceme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Use of nu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
Sequence
                                                                                                     4, 2006, 02:22:43; Search time 464.368 Seconds (without alignments) 2448.208 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR140453 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ARI54761
BD106994 W
BD1904994 W
BD251267 W
AR182880
AR182880
AR222213
AR222213
AR60743
AR607450
AX088932
AX088932
AX104575
AX104575
AX104575
AX104576
                GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                  5883141 segs, 28421725653 residues
                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                           Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                           nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR140453
AR154761
BD190419
BD251267
AR182880
AR182880
AR222213
AR432415
AR607450
AX0693578
AX104327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX104575
AX104776
AX104777
AX105103
                                                                                                                                                                                                      ggggtcaacgttgagggggg 20
                                                                                                                                                                                                                                  IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 200000000
                                                                                                                                                                     US-10-789-758A-4
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9b_ba: *
9b_in: *
9b_om: v. *
9b_om: v. *
9b_ow: *
9b_pr: *
9b_pr: *
9b_w: *
9b_w: *
9b_w: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
                                                                                                          May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77:: ...
77:: ...
10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing:
                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB
Maximum DB
                                                                           OM nucleic
                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                                                                                                                                                                                                                                                                               Maximum
                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
```

```
BD251267.1 GT:33061037

BD251267.1 GT:33061037

JP 2002537353-A/3.

synthetic construct

SM synthetic construct

SM synthetic construct

SM synthetic construct

Chaes I to 20)

Grandi, G., Rappuoli, R., Giuliani, M. M. and Pizza, M.

Enhancement of Neisseria antigen bactericidal activity using CG

motif-containing oligonucleotide

Datent: JP 2002537353-A 3 05-NOV-2002;

CHIRON SPA

OS Artificial Sequence

PP 2002537353-A/3

PP 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                     john barackman, manmohan simph, mildred ugozoli, jina kazazu, john
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Arificial Sequence
1P 200537353-A/3
05-NOV-2002 D 2000600685
09-FEB-2000 JP 2000600685
26-FEB-1999 US 60/121792
GUIDO GRANDI,RINO RAPPUOLI,MARZIA MONICA GIULIANI,MARIAGRAZIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A61K39/095, A61K31/7088, A61K39/39, A61P31/04//C07K14/22, C12N15/
Ott, G.S. and Ohagan, D.
Microemulsions with Adsorbed Macromoelecules and Microparticles
Pacent: JP 2002537102-A 3 05-NOV-2002;
Chiron Corporation
OS Artificial Sequence
No JP 2002537102-A/3
PD 05-NOV-2002
PF 09-FEB-2000 JP 2000600618
PF 09-FEB-2000 JP 2000600618
PF 29-JUL-1999 US 60/146391, 28-OCT-1999 US 60/161997, PR
26-PEB-1999 US 60/121858
PI john barackman, manmohan simph, mildred ugozoli, jina kazazu, j
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Enhancement of Neisseria antigen bactericidal activity using CG motif-containing oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism='Artificial Sequence'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
100.0%; Score 20; DB 6; Length 20;
Best Local Similarity 100.0%; Pred. No. 26;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
100.0%; Score 20; DB 6; Length 20;
Best Local Similarity 100.0%; Pred. No. 26;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .20
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers

    .20
    ^2organism="synthetic construct"
/mol_type="genomic DNA"
    /db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                             gary s ott,derek ohagan
Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                     donnelly,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD251267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD251267
                                                                                                                                                                                                                                                                                                                                                                                                                 HCHE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
BD251267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 synthetic construct
synthetic construct
synthetic construct
construct
construct
construct
synthetic construct
construct
synthetic construct
lobes 1 to 20)
S chwartz,D.A. and Krieg,A.M.
Use of nucleic acids containing unmethylated CPG dinucleotide in
the treatment of LPS-associated disorders
of nucleic acids containing unmethylated CPG dinucleotide in
the treatment of LPS-associated disorders
of nucleic acids containing unmethylated CPG dinucleotide in
the treatment of LPS-associated disorders
of Nucleic acids containing unmethylated CPG dinucleotide
partificial Sequence
phy 12001513776-A/63
pp 04-SEP-2001
pp 25-FEB-1998 UP 1998537810
pp 25-FEB-1999 UP 1998537810
pp 25-FEB-1999 UP 1998537810
pp 25-FEB-1999 UP 1998537810
pp 26-FEB-1999 UP 1998537810
pp AGIK49/00.CO7H21/02.CO7H21/04,A01M43/04
CC synthetic oligonucleotide
pp 1 containing c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DULYV419 20 bp DNA linear PAT 17-JUL-2003 Microemulsions with Adsorbed Macromoelecules and Microparticles. BD190419
                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD069974 1 1 20 bp DNA linear PAT 27-AUG-20
Use of nucleic acids containing unmethylated CPG dinucleotide in
the treatment of LPS-associated disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JP 2002537102-A/3.
synthetic construct
synthetic construct
other sequences; artificial sequences.
1 (bases 1 to 20)
Barackman, J., Simph, M., Ugozoli, M., Kazazu, J., Donnelly, J.,
                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .ce 1. .20
/organism='Artificial Sequence'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                 Query Match
100.0%; Score 20; DB 6; Length 20;
Best Local Similarity 100.0%; Pred. No. 26;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                 Immunostimulatory nucleic acid molecules
Patent: US 6239116-A 90 29-MAY-2001;
Location/Qualifiers

    .20
    ^corganism="synthetic construct"
    mol_type="genomic DNA"
    /db_xrefe="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                  1. .20
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BD069974.1 GI:22615577 JP 2001513776-A/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD190419.1 GI:33000158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                         Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
BD069974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
BD190419
                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

ô

LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM

RESULT 6 AR182880

ð

REFERENCE AUTHORS TITLE JOURNAL

FEATURES

ORIGIN

```
PAT 18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 20)
Krieg,A.M. and Weiher,G.
Method of treating cancer using immunostimulatory oligonucleotides
Patent: US 653292-A 12 25-NOV-2003;
University of Iowa Research Foundation; Iowa City, IA
Location/Qualifiers
1 (bases 1 to 20)
Krieg,A.M. and Hartmann,G.
Immunostimulatory nucleic acid molecules for activating dendritic
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Krieg, A.M., Davis, H.L., Wu, T. and Joachim, S. Vectors and methods for immunization or therapeutic protocols Patent: US 6821957-A 52 23-NOV-2004; University of lowa Research Foundation; Iowa City, IA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                Patent: US 6429199-A 47 06-AUG-2002;
University of Iowa Research Foundation; Iowa City, IA
Location/Qualifiers
                                                                                                                                                                                                 ch 100.0%; Score 20; DB 6; Length 20; Similarity 100.0%; Pred. No. 26; 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 20; DB 6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 20;
                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 20; DB 6;
llarity 100.0%; Pred. No. 26;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                    AR432435
Sequence 12 from patent US 6653292.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20 bp | 1
Sequence 52 from patent US 6821957.
                                                                                                                    1. .20
/organism="unknown"
/mol_type="genomic DNA"

    .20
    /organism="unknown"
    /mol_type="genomic DNA"

    .20
    /organism="unknown"
    /mol_type="genomic DNA"

                                                                                                                                                                                                                                                                      1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                        1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                          AR432435
AR432435.1 GI:40194770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR607443.1 GI:56659860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unclassified.
                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
AR607443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                     RESULT 9
AR432435
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                   PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             요
                                                                                                                  PAT 20-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 20-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 26-SEP-2002
                                                                                                                                                                                                           Unknown.
Unclassified.
1 (bases 1 to 20)
1 (bases 1 to 20)
Krieg,A. M. Davis,H.L., Wu,T. and Schorr,J.
Krieg,A. M. Davis, For immunization or therapeutic protocols
Vectors and methods for immunization or therapeutic protocols
Patent: US 6339068-A 52 15-JAN-2002;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
Unclassified.
1 (bases 1 to 20)
1 (bases 1 to 20)
Krieg,A.M., Davis,H.L., Wu,T. and Schorr,J.
Krieg,A.M., Davis,H.L., Wu,T. and Schorr,J.
Vectors and methods for immunization or therapeutic protocols
Patent: US 6339068-A 59 15-JAN-2002;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                          6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                         DB 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
100.0%; Score 20; DE
Best Local Similarity 100.0%; Pred. No. 26;
Matches 20; Conservative 0; Mismatches
                                                                                                             Sequence 52 from patent US 6339068. AR182880
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AR182887 20 bp 1
Sequence 59 from patent US 6339068.
AR182887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20 bp Sequence 47 from patent US 6429199.
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 20; Best Local Similarity 100.0%; Pred. No. 3 Matches 20; Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                        1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                   AR182880.1 GI:20226087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGTCAACGTTGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR222213.1 GI:23329678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR182887.1 GI:20226094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
Unclassified.
                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
```

DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM

RESULT 7 AR182887 LOCUS

ઠે

source

ORIGIN

TITLE JOURNAL PEATURES

AUTHORS REFERENCE

DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM

RESULT 8 AR222213

셤

ò

PAT 17-MAR-2001

RESULT 11 AR607450

ઠ 셤

```
Krieg,A.M., Schetter,C. and Vollmer,J.C.
munuostinulatory nucleic acids
Parent: WO 0122972-A 519 05-APR-2001;
UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 20; DB 6; Length 20; Best Local Similarity 100.0%; Pred. No. 26; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                 6; Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                         1..20
/organism="synthetic construct"
/or_type="unassigned DNA"
/db_xref="taxon:32630"
/note="CpG containing oligonucleotide"

    .20
    forganism="synthetic construct"
|mol type="unassigned DNA"
|db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic construct
synthetic construct
other sequences; artificial sequences.
                NA
PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 synthetic construct
synthetic construct
other sequences, artificial sequences.
                                                                                                                                  other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 20; DB 100.0%; Pred. No. 26; ative 0; Mismatches
                                                                                                                                                                                     Vaccine
Patent: WO 0100232-A 4 04-JAN-2001;
SmithKline Beecham Biologics SA (BE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 519 from Patent WO0122972. AXI04327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX104575 20 bp
Sequence 767 from Patent W00122972.
AX104575.1 GI:13920772
            20 bp
Sequence 4 from Patent WO0100232.
AX088932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGGTCAACGTTGAGGGGG 20
                                                                   AX088932.1 GI:13397690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX104327.1 GI:13920524
                                                                                                                                                                         Garcon, N. and Voss, G.
                                                                                                    synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GmbH (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
          LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
AX104575
LOCUS
                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
AX104327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                     REFERENCE
                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                              FEATURES
AX088932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 24-JAN-2001
                ö
                                                                                                                                                                       PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1..20
/organise=synthetic construct"
/organise=synthetic bna"
/mol type="unassigned bna"
/db_xref="taxon:32630"
/note="oligonucleotide"
nucleotides 1,2,15,16,17,18 and 19 have linkages with
thioate modification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                               1 (bases 1 to 20)
Krieg, A.M., Davis, H.L., Wu, T. and Joachim, S.
Vectors and methods for immunization or therapeutic protocols
Patent: US 6821957A 59 23-NOV-2004;
University of Iowa Research Foundation; Iowa City, IA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
100.0%; Score 20; DB 6; Length 20;
Best Local Similarity 100.0%; Pred. No. 26;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
100.0%; Score 20; DB 6; Length 20;
Best Local Similarity 100.0%; Pred. No. 26;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                          linear
                  Indels
                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vaccines
Patent: WO 0100231-A 4 04-JAN-2001;
SMITHKLINE BEECHAM BIOLOGICALS S.A. (BE)
Location/Qualifiers
                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
other sequences; artificial sequences.
1 Similarity 100.0%; Pred. No. 26; 20; Conservative 0; Mismatches
                                                                                                                                                                       AR607450 20 bp 1
Sequence 59 from patent US 6821957.
AR607450. GI:S6659867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX063578 20 bp
Sequence 4 from Patent WO0100231.
AX063578
                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cohen, J., Garcon, N. and Voss, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGG 20
                                                                      1 GGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 dederchácerreadedede 20
                                                  1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX063578.1 GI:12541302
                                                                                                                                                                                                                                                                                Unknown.
Unclassified.
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                     DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
```

DEFINITION ACCESSION VERSION KEYWORDS

TITLE JOURNAL

FEATURES

ORIGIN

RESULT 13

ઠે

AUTHORS

REFERENCE

RESULT 12 AX063578

ð

ô

Gaps

ö

Bource

ORIGIN

FEATURES

AUTHORS JOURNAL

TITLE

REFERENCE

PAT 30-APR-2001

PAT 30-APR-2001

ö

Gaps ö

```
I
Krieg, A. M., Schetter, C. and Vollmer, J.C.
Immunostimulatory nucleic acids
Patent: WO 0122972-A 757 05-APR-2001;
UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
GmbH (DE)
                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                     Query Match
Best Local Similarity 100.0%; Pred. No. 26;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                           Location/Qualifiers
1. .20
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                             Search completed: May 4, 2006, 03:52:03 Job time: 467.368 secs
                                                                                                                                                                                                                                                                 source
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                            FEATURES
                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                    ŝ
                                                                                                                                                                                                                                                                                                a
```

This Page Blank (uspto)

Title: Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Searched:

Database

```
Abs 78485 Anglogene Abs 78283 Anglogene Abs 78035 Anglogene Abl39032 Immunosti Abl39033 Immunosti Ab446817 Immunosti Abs 70558 Dendritic Acc48308 CpG oligo Abz 8013 Immunosti Acc3113 D class C Acc48308 Immunosti Ach37265 Immunosti Adb37265 Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAT16894-T16898 are immunomodulatory oligonucleotides contg. at least one unmethylated C-G dinucleotide. The oligonucleotides can be used to activate B cells and natural killer cells. They can be used for treating, preventing or ameliorating an immune system deficiency, e.g. a tumour, cancer or a viral, fungal, bacterial or parastitic infection. They are also useful in stimulating a subject's response to a vaccine
                                                                                                                                                                                                                                                                                                                                        Immunomodulatory oligonucleotide contg. unmethylated C-G dinucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunomodulatory oligo:nucleotide(s) contg. an un-methylated CpG dinucleotide - used for stimulating activity or when methylated for inhibitory activity.
                                                                                                                                                                                                                                                                                                                                                       Unmethylated, immunomodulator; B cell activation; vaccine, response stimulation; autoimmune disease; infection; ss.
                                                                                                                                                                                                                                            ALIGNMENTS
               ABS78485
ABS78483
ABS78483
ABL39033
ABL39033
ABL488
ABX46517
AAL44448
ACC48308
ACC48313
ACC93113
ACC93113
ACD9328
ADB37265
ADB37265
ADB37265
AAD60208
                                                                                                                                                                                         ADI01054
ACA63219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (IOWA ) UNIV IOWA STATE RES FOUND INC.
AAF27750
ABS78484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 5; Page 39; 45pp; English.
                                                                                                                                                                                                                                                                                    AAT16894 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                       95WO-US001570.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       94US-00276358.
                                  ωφωφωφωσοσοσο
                                                                                                                                                                                                                                                                                                                        (first entry)
WPI; 1996-105847/11.
07-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                                    WO9602555-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-JUL-1994;
                                                                                                                                                                                                                                                                                                                        06-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
AAT16894;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Krieg AM;
                                                                                                                                                                                                                                                                              AAT16894
                                                                                                                                                                                                                                                                      RESULT
CpG-N mot
CpG-N mot
CpG adjuv
CpG motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oligonucl
Poly-G im
Human IFN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunosti
Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunogen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunorea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aat16894 Immunomod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unmethyla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immune re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CG motif
                                                         4, 2006, 01:23:12; Search time 150.46 Seconds (without alignments) 885.910 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aav47684 U
Aav27654 I
Aav27654 I
Aav274245 C
Aav3044 O
Aah20039 C
Aah19262 C
Aaf98731 H
Aaf98731 H
Aaf99764 I
Aaf99764 I
Aaf99390 I
Aaf99360 I
        5.1.7
Biocceleration Ltd.
                                                                                                                                                                         9993994
                                                                                                                                                                       Fotal number of hits satisfying chosen parameters:
                                                                                                                                                        4996997 segs, 3332346308 residues
         GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                          nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV74238
AAV74245
AAA90449
AAH20394
AAH50658
AAH19262
AAH19262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC80669
AAF59504
AAF99567
AAF99764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF99390
AAF99763
AAA92361
AAS09639
                                                                                                              ggggtcaacgttgaggggggg 20
                                                                                                                             IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                     geneseqn2001as:*
geneseqn2001bs:*
geneseqn2002as:*
geneseqn2002bs:*
                                                                                                                                                                                                                                                                                                                                         geneseqn2003cs:*
geneseqn2003ds:*
                                                                                                                                                                                                                                                                                                                                                           geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                        geneseqn2003as:*
geneseqn2003bs:*
                                                                                                                                                                                                                                                                                                                                                                  geneseqn2004bs:
geneseqn2005s:*
                                                                                                                                                                                                                                                          geneseqn1980s: *
geneseqn1990s: *
                                                                                                                                                                                                                                                                             geneseqn2000s:*
                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                           US-10-789-758A-4
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                    Geneseq 21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1000.00
                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Match
                                                           May
```

Score

Result

Aad60208 Oligonucl Adg68114 Unmethyla Adi01054 Immunosti Aca63219 Toll-like Adm99023 Immunosti Ado04739 CpG oligo

င္တ

유 ò

```
Immunostimulatory; oligodeoxyribonuclectide; ODN; unmethylated CpG dinuclectide; activate; lymphocyte; immune response; Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease; desensitisation therapy; artificial adjuvant; antibody generation; ss.
                                                                                                                                                                                                                                                                                                      Immunostimulatory oligodeoxyribonucleotide of the invention.
                     GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96US-00738652.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (IOWA ) UNIV IOWA RES FOUND
                                                                                                                                                   AAV27654 standard; DNA; 20
                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Krieg AM, Kline JN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1998-272127/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-OCT-1996;
                                                                                                                                                                                                                                                        01-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9818810-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-MAY-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                     AAV27654;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                        ð
                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This sequence represents an unmethylated CpG dinucleotide, and can be used in the method of the invention. The method is for treating a subject waving, or at risk of having an acute decrement in air flow, comprising administering a nucleic acids encoutaining at least one daministering a nucleic acids containing an unmethylated CpG unmethylated CpG. The nucleic acids containing an unmethylated CpG dinucleotide affect an immune response in a subject by activating natural killer cells (NK) or redirecting a subject's immune response from a Th2 to a Th1 response by inducing monocytic and other cells to produce Th1 cytokines. They can be used to treat pulmonary disorders having an immune component, such as asthma or environmentally induced airway disease. They can also be used to treat diseases associated with Grampositive bacterial infections or endotoxaemia including bacterial meligits, neonatal sepals, cystic fibroals, inflammatory bowel disease and liver cirrhosis, Gram-negative pneumonia, Gram-negative abdominal abacess, haemorrhagic shock, disseaminated intravascular coagulation, or an inflammatory response to lipopolysaccharide
                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unmethylated CpG dinucleotide; immune response; bacterial meningitis; natural killer cell activation; NK cell; Th2 response; neonatal sepsis; pulmonary discorder; asthma; environmentally induced airway disease; bacterial infection; endotoxaemia; therapy; cystic fibrosis; inflammatory bowel disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
Or
                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Use of nucleic acids containing an unmethylated CpG - for treating subject having or at risk of having an acute decrement in air flow inhibiting an inflammatory response.
                                                                                                     .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 3;
                                          Score 20, DB 2, Length 20; Pred. No. 3; 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unmethylated CpG dinucleotide 1585.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 35; Page 27; 65pp; English
                                                                                                                                                        1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                        1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                        B.
                                                  Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US003678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97US-0039405P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IOWA ) UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                      AAV47684 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                           20-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schwartz DA, Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-480941/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9837919-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local S...
20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                      AAV47684;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                           AAV47684

IID AAV4

AAV

AAV

AAV4

AAV4
```

```
AAV27641-751 represent immunostimulatory oligodeoxyribonucleotides (ODNs)

Cof the invention. The ODNs contain at least one unmethylated CpG

dinucleotide, and have the formula: 5' MIXIGGARN2 3', where at least one

controlled separates consecutive CpGs, XI is adenine, guanine, or

thymine, X2 is cytosine or thymine, N is any nucleotide and N1+N2 is 0-26

CC thymine, X2 is cytosine or thymine, N is any nucleotide and N1+N2 is 0-26

CC bases with the provision that NI and N2 does not contain a CCGG tetramer

CC or more than one CGG or CGG trimer OR 5' NXIX2CGA3X4N 3', where at least

CC one nucleotide separates consecutive CpGs, XI and X2 are selected from

CG GpT, GpG, GpA, ApT and ApA, X3and X4 are selected from TpT or CpT', N is

CC does not contain a CCGG tetramer or more than one CCG or CGG trimer. The

CC does not contain a CCGG tetramer or more than one CCG or CGG trimer. The

CC does not contain a CCGG tetramer or more than one CCG or CGG trimer.

CC does not contain a Th2 to a Th1 (e.g. by inducing monocytic cells and other

CC ells to produce Th1 cytokines, including In-12, IFN-gamma and GM-CSF).

CT he ODNs can be used to treat or prevent an asthmatic disorder,

autoimmune diseases, in desensitisation therapy, as an artificial

CC human and adjuvant during antibody generation in a mammal such as a mouse or a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
New immunostimulatory nucleic acid molecules - which contain at least one unmethylated CpG dinncleotide, used for treating e.g. tumours, infections or autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 3; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                           Claim 26; Page 83; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGTCAACGTTGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 100.0%;
hes 20; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
```

ö

Gaps

ö

0; Indels

0; Mismatches

Conservative

Similarity

Best Loca Matches

RESULT 4 RESULT

AAV74238;

Synthetic.

Davie HL,

```
AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a method for enhancing the immunostimulatory effect of an antigen encoded by nucleic acid contained in a nucleic acid construct. The method involves determining the CpG-N and CpG-S motifs present in the construct, removing neutralising CpG (CpG-N) motifs and optionally inserting stimulatory CpG (CpG-S) motifs in the construct, thereby producing a nucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a parasite. They can also be used for expression of a therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines, apoptotic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to correct PA field.)
                                            CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN; viral antigen; bacterial antigen; parasite; therapeutic; growth factor; toxin; tumour suppressor; cytokine; apoptotic procesin; interferon; hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of neutralising CpG and stimulating CpG motifs in DNA vectors - for ancing the immunostimulatory effect of an antigen or enhancing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CpG öligonucleotide, CpG motif; adjuvant; microdroplet emulsion; microemulsion; adsorbent microparticle; vaccine; Th1 immune response; viral infection; bacterial infection; parasitic infection; HCV, HBV, hepatitis C virus; hepatitis B virus; heroes simplex virus; HSV; HIV; human immunodeficiency virus; cytomegalovirus; CMV; influenza virus; rabies virus; cholera; diphtheria; tetanus; pertussis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                      (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CpG adjuvant oligonucleotide, SEQ ID NO:3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           enhancing the immunostimulatory effect c
expression of a therapeutic polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page 64; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schorr J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGGTCAACGTTGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВБ.
  CpG-N motif SOS-ODN 1585 DNA.
                                                                                                                                                                                                                                                                                                     98WO-US010408.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.08;
                                                                                                                                                                                                                                                                                                                                                    97US-0047209P
                                                                                                                                                                                                                                                                                                                                                                          97US-0047233P
                                                                                                                                                                                                                                                                                                                                                                                                                                            UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA90449 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-JAN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Krieg AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                            (IOWA ) UNIV IOWA RE
(QIAG-) QIAGEN GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1999-059712/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                           WO9852581-A1
                                                                                                                                                                                                                                                                                                     20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                    20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                          20-MAY-1997;
                                                                                                                                                                                                                                                         26-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Davis HL,
                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA90449;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA90449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          method for enhancing the immunostimulatory (c), the method by nucleic acid contained in a nucleic acid construct. The method by nucleic acid contained in a nucleic acid construct. The method removing actermining the CpG-N and CpG-S motifs present in the construct, removing neutralising CpG (CpG-N) motifs and optionally inserting stimulatory CpG (CpG-N) motifs in the construct, thereby producing a mucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a parasite. They can also be used for expression of a therapeutic polypeptide, e.g. growth factors, toxins; tumour suppressors, cytokines, apoptotic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to correct PA field.)
                                                                                                                                                                                                      CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN; viral antigen; bacterial antigen; parasite; therapeutic; growth factor; toxin; tumour suppressor; cytckine; apoptotic protein; interferon; hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for enhancing the immunostimulatory effect of an antigen or enhancing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20; DB 2; Length 20; Pred. No. 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTTAWA CIVIC HOSPITAL LOEB RES INST.
UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        enhancing the immunostimulatory effect a expression of a therapeutic polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wu T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Page 64; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schorr J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGTCAACGTTGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGGTCAACGTTGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-US010408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0047209P
97US-0047233P
AAV74238 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV74245 standard; DNA; 20
                                                                                                                                                            CpG-N motif S-ODN 1628 DNA
                                                                                          (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Krieg AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-059712/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (IOWA ) UNIV IOWA R
(QIAG-) QIAGEN GMBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (OTTA-) OTTAWA
                                                                                                                                                                                                                                                                                                                                                                        WO9852581-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-MAY-1997;
                                                                                        20-MAR-2003
15-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-2003
15-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                      26-NOV-1998
```

for

ö

Gaps

ö

AAV74245;

KARKARE

RESULT 5 AAV74245

ઠે 셤

```
cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Page 14; 41pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                         /mod base= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멾.
                                                                                                                                                                                                                                                                                       01-NOV-2000; 2000WO-US041735.
                                                                                                                                                                                                                                                                                                                     99US-0163157P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MAPK pathways and NF-kappaB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAH50658 standard; DNA; 20
                                                                                                                                          1. .20
/*tag= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-AUG-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-343486/36.
                                                                                                                                                                                                                                                                                                                                                                   (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                        WO200132877-A2
                                                                                                                           Key
modified base
                                                                                                                                                                                                                                                                                                                                                                                                     Mackichan ML;
                                                                                                                                                                                                                                                                                                                   02-NOV-1999;
                                                                                                                                                                                                                                                                                                                                     24-NOV-1999;
                                                                                           Unidentified
                                                                                                                                                                                                                                                       10-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAH50658;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH50658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              XXXX
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a microdroplet emulsion (microemulsion) with an adsorbent surface, and which comprises a metabolisable oil and an emulsifying agent (a detergent). It also relates to a composition comprising the microemulsion and a microparticle with an adsorbent surface, where the microparticle comprises a polywer selected from a composition.

Soly(ablar-hydroxy acid), a polyhydroxy butyric acid, a polycaprolaction, a polyothoseter, a polyhydroxy butyric acid, a polycaprolaction, a polyothoseter, a polyhydroxy butyric acid, a polycaprolaction, a polyothoseter, and a polyhydroxy such as polyment as poly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                    Microemulaton having an adsorbent surface comprising a microdroplet emulation consisting of a metabolizable oil and an emulsifying agent which is a detergent, useful as a vaccine to treat bacterial, viral, and parasitic infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                       Ugozzoli M, Singh M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 3;
Matches 20; Conservative 0; Mismatches 0; Indels
Helicobacter pylori; Haemophilus influenzae; malaria; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seguence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CpG motif containing oligonucleotide SEQ ID #5.
                                                                                                                                                                                                                                                       Ott GS, Donnelly J, Kazzaz J,
                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 17; Page 40; 95pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                       99US-0121858P.
99US-0146391P.
99US-0161997P.
                                                                                                                           09-FEB-2000; 2000WO-US003331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAH20394 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                      WPI; 2000-587123/55.
                                                                                                                                                                                                                        CHIR ) CHIRON CORP.
                                                               WO200050006-A2.
                                                                                                                                                          26-FEB-1999;
                                                                                                                                                                         29-JUL-1999;
28-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-AUG-2001
                                                                                                                                                                                                                                                                        Barackman J;
                                                                                             31-AUG-2000
                                                                                                                                                                                                                                                       O'hagan D,
                               Synthetic
   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2×2×2×2
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unmethylated CG dinucleotide sequences are commonly found in bacterial DNA, and have been found to stimulate the innate immune system. Natural killer and T cells are activated by exposure to oligonucleotides containing CpG motifs. Oligonucleotides containing CpG motifs can be used as adjuvants in vaccines. The present invention relates to a CpG receptor. The CpG receptor contains a Toll homology domain (THD). The Toll receptor family are associated with responses to pathogens. CpG oligonucleotides may act as stimulators of various immune responses. The CpG receptor or cells expressing the receptor are useful for identifying a compound which binds to or modulates an activity of the CpG receptor. The compounds are useful in e.g. vaccine adjuvants promoting cellmediated immune responses, antibacterials, (e.g. protection from Listeria infection), tumour immunotherapy, allergy treatment, (e.g. suppressing IgE in human PBMC, shifting from Th2 to Th1) and as anti-inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    agents (e.g. for use in cystic fibrosis, sepsis, heart disease, chlamydia, inflammatory bowel disease, arthritis and multiple sclerosis). The present sequence represents a CpG motif containing oligonucleotide used in examples demonstrating that CpG oligonucleotides can activate the
Immune system stimulator; CpG motif; CpG receptor; CpG-R; antibacterial; immune response; vaccine adjuvant; tumour immunotherapy; allergy; anti-inflammatory; cystic fibrosis; sepsis; heart disease; chlamydia; inflammatory bowel disease; arthritis; multiple sclerosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel CpG receptor and nucleic acid molecule encoding the receptor, for modulating immune response and for identifying compounds of therapeutic use which bind and/or modulate the activity of the receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "Phosphorothioate internucleoside linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB 4; Length 20; 100.0%; Pred. No. 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
```

29-MAY-2001

Krieg AM,

Synthetic.

```
The present invention relates to a composition comprising an isolated immunostimulatory nucleic acid which comprises unmethylated cytosine-guanine (CpG) dinucleotides and an antigen in a carrier. The present sequence is an oligonucleotide, which was used in the present invention. The immunostimulatory nucleic acids are useful for ameliotrating an immune subject. The immunostimulatory nucleic acids are also useful for a subject. The immunostimulatory nucleic acids are also useful for desensitising a subject against the occurrence of an allergic reaction in response to contact with a particular allergen. The immunostimulatory nucleic acids are also useful for vaccination and for treating leukaemia in a subject on administration prior to or in conjunction with a chemotherapy, so that the subject or in conjunction with a chemotherapy. The compositions are useful for inducing an antigen specific immune response in the subject. The compositions can be also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunostimulatory nucleic acid; ISNA; human; interferon alpha; IFN-alpha; viral infection; phosphorothioate backbone; palindrome; cancer; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Compositions comprising immunostimulatory molecules which comprise unmethylated CpG dinucleotides useful for ameliorating immune system deficiency, treating leukemia and desensitizing subject against allergic
                     Immunostimulant; antiallergic; cytostatic; antiasthmatic; vaccine; gene therapy; CpG; immune system deficiency; tumour; cancer; infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 100.0%; Score 20; DB 4; Length 20; Best Local Similarity 100.0%; Pred. No. 3; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Poly-G immunostimulatory nucleic acid SEQ ID NO: 135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    used to treat or prevent the symptoms of asthma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Klinman D, Steinberg AD;
                                                                                                                                                                                                                                                                                                                                                                                                                                       (COLE-) COLEY PHARM GROUP INC.
(USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 12; Col 14; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP.
                                                                                                                                                                                                                                                                                                                                     94US-00276358.
95US-00386063.
                                                                                                                                                                                                                                                                               96US-00738652.
                                                                                                                                                                                                                                                                                                                                                                                                                 (IOWA ) UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAF98854 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Krieg AM, Kline J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-280761/29
                                                                         leukaemia; ss.
                                                                                                                                                                                                                                                                                    30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                     15-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-JUN-2001
                                                                                                                                                                             US6207646-B1
                                                                                                                                                                                                                                                                                                                                                              07-FEB-1995;
                                                                                                                                                                                                                                 27-MAR-2001.
                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF98854;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF98854
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes methods for inducing interleukin 6 (IL-
killer cell lytic activity. The methods comprise administering to the
subject or exposing a natural killer cell to an immunostimulating natural
acid. Also described are: (1) inducing IL-6 in a subject comprising
administering to the subject to induce IL-6 in the subject to
immunostimulatory nucleic acid; (2) stimulating natural killer cell lytic
activity comprising exposing a natural killer cell to the
immunostimulatory nucleic acid to stimulate natural killer cell lytic
activity; (3) inducing interferon-gamma in a subject to treat an immune
system deficiency comprising administering to the subject to induce
system deficiency comprising administering to the subject to induce
inducing IL-12 in a subject comprising administering to the subject to inducing inmunostimulatory nucleic acid. The methods are useful for inducing IL-6,
immunostimulatory nucleic acid. The methods are useful for inducing IL-6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     interferon-gamma or IL-12, or stimulating natural killer cell lytic estivity in a subject, particularly a human. The methods are particularly useful for modulating an immune response. A4450571 to A4450671 represent oligonucleotide sequences used in the exemplification of the present
                                                                      Immunostimulatory, inducing, natural killer cell, lytic activity, unmethylated CpG dinucleotide, immune response, B cell proliferation, Th1; immune activation; interleukin 6; IL-6; interferon gamma; IFN-gamma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Methods for inducing II-6, interferon-gamma or II-12, or stimulating natural killer cell lytic activity in a human, comprise administering to the subject or exposing a natural killer cell to immunostimulatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                        Immune response modulating related oligonucleotide SEQ ID NO:90.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.0%; Pred. No. 3;
Matches 20; Conservative 0; Mismatches 0: Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (IOWA ) UNIV IOWA RES FOUND.
(COLE-) COLEY PHARM GROUP INC.
(USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Col 91; 74pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH19262 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                97US-00960774.
                                                                                                                                                                                                                                                                                                                                                                                                               96US-00738652.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-JUL-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oligonucleotide 1585.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kline JN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-380456/40.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acids.
                                                                                                                                                  cytokine, 88.
                                                                                                                                                                                                                                                         US6239116-B1.
                                                                                                                                                                                                                                                                                                                                                                30-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                 30-OCT-1996;
```

ö

Gaps

; 0

AAH19262;

셤 ઠે

ď

```
The present invention describes an improvement to a method requiring the administration of interferon alpha (IFN-alpha), involving administering an immunostimulatory nucleic acid (ISNA). The sequences of a number of such nucleic acids are also provided. These may comprise oligonucleotides with phosphorothicate backbones, palindromes, or G-rich sequences. The agequences of the invention are useful in the treatment of proliferative diseases, such as cancers, and viral infections. The present sequence is an example of an immunostimulatory oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CpG oligodeoxynucleotide; unmethylated; antigen-presenting cell; immunogenic; cytokine release; natural killer cell; NK cell activation; cell-mediated immune response; T-cell response; humoral response; B-cell response; antibody production; immune response induction; vaccine; allergy; asthma; infection; bacterial; viral; fungal; protozoal; parasitic; tuberculosis; AIDS; autoimmune disease; lupus erythematosus; rheumatoid arthritis; multiple sclerosis; solid tumour; cancer; immune deficiency; biological warfare agent; cytostatic; antiarthritic; antimicrobial; antiallergic; protozoacide; tuberculostatic; antiarthritic; antiasthmatic; dermatological; phosphorothioate; ss.
                                                                                                                                             Improving the efficacy of treatments involving the administration (interferon-alpha by co-administering an isolated immunostimulatory nucleic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 20; DB 4; Length 20; 100.0%; Pred. No. 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunogenic CpG oligodeoxynucleotide, SEQ ID NO:89.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                 Krieg A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Verthelyi D;
                                                                                                                                                                                                                                             Claim 19; Page 73; 168pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                   (COLE-) COLEY PHARM GROUP INC. (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 L2-APR-2000; 2000WO-US009839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0128898P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAC80669 standard; DNA; 20
                                                                                 Bratzler RL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Klinman D, Ishii K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ISHI/) ISHII K.
(VERT/) VERTHELYI D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-006880/01
                                                                                                                     WPI; 2001-290487/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (KLIN/) KLINMAN D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200061151-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-APR-1999;
                                                                                 Hartmann G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-0CT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAC80669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAC80669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes an improvement to a method requiring the administration of interferon alpha (IFN-alpha), involving administering an immunostimulatory nucleic acid (ISNA). The sequences of a number of such nucleic acids are also provided. These may comprise oligonucleotides with phosphorothicate backbones, palindromes, or G-rich sequences. The agequences of the invention are useful in the treatment of proliferative diseases, such as cancers, and viral infections. The present sequence is an example of an immunostimulatory oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunostimulatory nucleic acid; ISNA; human; interferon alpha; IFN-alpha;
viral infection; phosphorothioate backbone; palindrome; cancer; ds.
                                                                                                                                                                                                                                                                                          Improving the efficacy of treatments involving the administration of interferon-alpha by co-administering an isolated immunostimulatory nucleic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human IFN-alpha immunostimulatory nucleic acid SEQ ID NO: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 20; DB 4; Length 20; illarity 100.0%; Pred. No. 3; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note= "phosphorothioate linkage"
15. 19
*tag= b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "phosphorothioate linkage'
                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 24; 168pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                            Bratzler RL, Krieg A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= a
/mod_base= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mod base= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                              (COLE-) COLEY PHARM GROUP INC (IOWA ) UNIV IOWA RES FOUND.
                                                                                 27-SEP-2000; 2000WO-US026527.
                                                                                                                         99US-0156147P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27-SEP-2000; 2000WO-US026527.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0156147P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF98731 standard, DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                  WPI; 2001-290487/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
tes 20; Conserv
WO200122990-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200122990-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-SEP-1999;
                                                                                                                         27-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-JUN-2001
                                                                                                                                                                                                                            Hartmann G,
                                        05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local 8
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAF98731;
```

RESULT 11

δ g ö

Gaps

us-10-789-758a-4.rng

```
The invention relates to novel immunogenic CpG oligodeoxynucleotides (AAC80581-C80723). The oligonucleotide are at least 10 bases long and comprise one of the generic sequences 5'-NNNT-20G-WNNN-3' or 5'-RY-CpG-RY -3'. The central CpG motif is unmethylated, and the oligonucleotides optionally have phosphorothioate linkages which make them more resistant co degradation. The invention also relates to an oligonucleotide delivery complex comprising an oligonucleotide of the invention and a targetting agent, and a pharmaceutical composition comprising the oligonucleotide delivery complex. The oligonucleotides are able to induce either a cell-mediated (T-cell) response or a humoral (B-cell, antibody) response, with oligonucleotides of the sequence 5'-RY-CpG-RY-3' being able to induce a cell-mediated response, and those of the sequence 5'-NNNT-CpG-WNN-3' cell-mediated response, and those of the sequence 5'-NNNT-CpG-WNN-3' cell-mediated or induce a humoral response. It is thought that after administration, the oligonucleotide acts on antigen-presenting cells (e.g., macrophages and dendritic cells), which then release cytokines, cell-adding to activation of natural killer (KK) cells. A cell-mediated or humoral response can then occur by activation of T- or B-cells. The induction of an immune response is useful for treating, preventing or anneliorating an allergic reaction (preferably asthma), or an infection, where an immunogenic CpG oligonucleotide is administered either alone or in combination with an anti-allergenic agent or anti-infectious agent. Thinitis , hayfever, unticaria, food allergies and other actopic.

The allergic conditions which may be treated include viral, the secondarial, fungal and protozoal infections such as tuberculosis, Albs, inserting and the infections with elementary elementary of an anticipant of an anticipan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                          allergies, cancer, and autoimmune disorders and for ameliorating symptoms resulting from exposure to a bio-warfare agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exposure to an agent of biological warfare. An immunogenic CpG oligonuclectide, either alone or in combination with an anti-cancer agent, is useful for treating solid tumour cancer. The induction of an immune response is used in antisense therapy and to improve the efficacy of a vaccine. The oligonuclectide is preferably administered to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lymphocytes ex vivo, producing activated lymphocytes which are then administered to the host. The present sequence represents an immunogenic CpG oligodeoxynucleotide of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 [mmunostimulatory CpG oligonucleotide WD1004 for use in an HIV vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        used in the treatment of an autoimmune disorder (e.g., lupus erythematosus, rheumatoid arthritis and multiple sclerosis), a disease associated with immune system deficiency, and symptoms resulting from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
  Novel oligonucleotides useful for the prevention and treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunostimulatory CpG oligonucleotide; adjuvant; HIV antigen;
HIV infection; vaccine; prophylaxis; treatment; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 20; DB 4; Length 20; Best Local Similarity 100.0%; Pred. No. 3; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 dedercaacerreaecece 20
                                                                                                           Claim 4; Page 37; 46pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF59504 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40200100232-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF59504;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF59504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DXBXBXBXBXBXBX
```

```
The invention relates to an HIV vaccine comprising an HIV antigen and an immunostimulatory oligonucleotide (AAF59501-AAF59508). With the exception of oligonucleotide WD1005 (AAF59505), the immunostimulatory oligonucleotides contain at least one unmethylated CpG motif. In preferred embodiments the internucleotide linkage is phosphorodithioate, although phosphodiester and other internucleotide bonds, or mixtures of linkages are within the scope of the invention. The HIV antigen may be selected from gp160, gp120, Nef, Tat, and Nef or Tat derivatives or fusion proteins. The vaccine is used for the prophylaxis or treatment of HIV infection in a patient. The present sequence represents a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vaccine, cytostatic, virucidal; bactericidal; fungicidal; anti-parasitic; imminostimulatory; tumour; viral infection; bacterial infection; fungal infection; parasitic infection; encer; asthms; infection adisease; allergy; immune deficiency; phosphorothioate; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunostimulatory CpG oligonucleotide for use in the
                                                                                                                                                                                              New vaccine formulation comprising human immunodeficiency virus (HIV) antigen and immunostimulatory CpG oligonucleotide, useful for preventing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 20; DB 4; Length 20; 100.0%; Pred. No. 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                              antigen and immunostimulatory CpG oligonu
and treating HIV infections in a patient.
                                                                                               (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunostimulatory nucleic acid #683.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Krieg AM, Schetter C, Vollmer J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                Claim 10; Page 17; 23pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 eeeerchacerreaeeeee 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGGTCAACGTTGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
               28-JUN-2000; 2000WO-EP005998.
                                                99GB-00015205
                                                              31-JAN-2000; 2000GB-00002200.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-SEP-2000; 2000WO-US026383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-SEP-1999; 99US-0156113P.
27-SEP-1999; 99US-0156135P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-AUG-2000; 2000US-0227436P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (IOWA ) UNIV IOWA RES FOUND.
(COLE-) COLEY PHARM GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dest Match
Best Local Similarity 100...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF99567 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-JUN-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vaccine of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    claimed
                                                                                                                                                               WPI; 2001-122974/13
                                                                                                                                Voss G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200122972-A2.
                                                29-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-APR-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    specifically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                Garcon N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF99567;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF99567
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
```

```
Search completed: May 4, 2006, 02:44:30
Job time : 156.46 secs
                                                                                                                                                                                                                                                                                                                                                     1 GGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                   1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                    Matches
888888888888888888
                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                         The present invention relates to a method for stimulating an immune response. The method comprises administering an immunostimulatory nucleic acid to a non-rodent subject in sufficient quantity to stimulate an immune response. The present sequence is one such immunostimulatory nucleic acid. The immunostimulatory nucleic acids can be pyrimidine rich (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma, hasemophilus, campylobacter, clostridium, Escherichia coli and/or staphylococus), fungal antigens and/or parasitic antigens. The method is also useful for preventing cancer, asthma, infectious disease, allergy or immune deficiency. The present sequence can also be used to redirect a Thi immune response and to activate immune cells. Note: the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vaccine, cytostatic, virucidal, bactericidal, fungicidal, anti-parasitic, immunostimulatory, tumour; viral infection; bacterial infection; fungal infection; parasitic infection; encer; asthma; infections disease; allergy, immune deficiency; phosphorothioate; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vaccinating against tumors, infectious diseases, allergies and asthma using immunostimulatory Py-rich and TG nucleic acids.
                                                Vaccinating against tumors, infectious diseases, allergies and asthma
using immunostimulatory Py-rich and TG nucleic acids.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
100.0%; Score 20; DB 4; Length 20;
Best Local Similarity 100.0%; Pred. No. 3;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                   present sequence may have a phosphorothicate backbone
                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunostimulatory nucleic acid #880.
                                                                                              Claim 101; Page 53; 338pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 101; Page 57; 338pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vollmer J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-SEP-1999; 99US-0156113P.
27-SEP-1999; 99US-0156135P.
23-AUG-2000; 2000US-0227436P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-SEP-2000; 2000WO-US026383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF99764 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COLE-) COLEY PHARM GMBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Krieg AM, Schetter C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-273485/28.
             WPI; 2001-273485/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200122972-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF99764;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF99764
 셤
```

```
ö
                        response. The method comprises administering an immunostimulatory uncleic acid to a non-rodent subject in sufficient quantity to stimulate an immunostimulatory in sufficient quantity to stimulate an nucleic acid. The present sequence is one such immunostimulatory nucleic acids can be pyrimidine rich (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae, haemophilus, campylobacter, clostridium, Escherichia coli and/or staphylococcus), fungal antigens and/or parasitic antigens. The method is also useful for present sequence can also be used to redirect a Thi immune response and to activate immune cells. Note: the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
    an immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 20; DB 4; Length 20; 100.0%; Pred. No. 3; tive 0; Mismatches 0; Indels
present invention relates to a method for stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    present sequence may have a phosphorothioate backbone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 20 BP; 3 A; 2 C; 12 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
```

Scoring table:

88

Minimum | Maximum |

Database

Perfect score:

Sequence:

OM nucleic

Run on:

```
Katagiri, S., Wu, J., Ito, Y., Karasawa, W., Shibata, M., Kanamori, H., Katayose, Y., Namiki, N., Matsumoto, T. and Sasaki, T.
End Sequencing and Chromosomal in silico Mapping of BAC Clones
Derived from an indica Rice Cultivar, Kasalath
Breeding Science 54, 273-279 (2004)
Es (bases 1 to 938)
Es Saski, T., Matsumoto, T. and Wu, J.
Direct Submission
L. Direct Submission
L. Submitted (29-OCT-2004) Takuji Sasaki, National Institute of Submitted (29-OCT-2004) Takuji Sasaki, National Institute of Agrobiological Sciences, Rice Genome Research Program; Kannondai 2-1-2, Tsukuba, Ibaraki, 36-8602, Japan
(E-mail:tsasaki@nias.affrc.go.jp, URL:http://rgp.dna.affrc.go.jp/, Tel:81-298-38-7441, Fax:81-298-38-7468)
The orientation of the sequence is from SP6 side of the BAC clone.
Location/Qualifiers
                            CK391782 K0835F99-
AL830714 AL830714
BK253782 EM1 18 F0
BK253782 EM253788
CF895871 A0203E02-
CW016402 ZMBLC000
CF897160 A0214B09-
BQ418485 1445c07.y
CZ083483 OM_B3008
CW265478 104_334 I
CB663538 OSJNEG08K
BI716183 1031007G0
BY758462 BY758462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Just pp DNA linear GSS 03-NOV-2004 Oryza sativa (indica cultivar-group) genomic DNA, BAC end sequence, BAC clone:K0155C03_R, genomic survey sequence.
                                                                                                                                                                                                                                                       BZ714778 OCEAIGITM
BF607967 WY1 00090
CW265479 104 734 11
CX724308 1331902 N
AZ099791 RPCI-23-4
CC92720 t106j14ba
BZ714768 OCEAIGITC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta;
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae;
Ehrhartoideae, Oryzeae, Oryza.
               GR Ea38D
KO835F09-
AL830714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps

    .938
/organism="Oryza sativa (indica cultivar-group)"
/oul_type="genomic DNA"
/cultivar="Kasalath"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 938;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 18.4; DB 10;
Pred. No. 2.8e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                           ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:39946"
/clone="K0155C03_R"
                                                                                                           CW016402
CF897160
CF896689
                                                                                                                                                          BQ418485
CZ083483
CW265478
CB663538
BI716183
BY758462
BZ714778
BF607967
                                                                                                                                                                                                                                                                                          CW265479
BM003672
CO076740
CK391782
AL830714
                                                              BG355722
BX253788
CF895871
                                                                                                                                                                                                                                                                                                         CX724308
AZ099791
CC927270
BZ714768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AG856275.1 GI:55322510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.0%;
                                                                                                             102
                                                                                                                                                                                                                                                                                            2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
 Similarity
 Query Match
Best Local Simi
Matches 19;
 RESULT 1
AG856275/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
   ORIGIN
                     000000
                                                                                                                    0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CW790508 SP Ba006
BM001652 1031097F0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AG856275 Oryza sat
CZ950619 265595 TO
BB584327 BB584327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BY277221
CA577271 K0707A12-
CO076646 GR EA38B
CF484305 POLI_4_A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CH240_348
BX356727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601656126
BX386891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   602704423
FGAS08092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CA452850 3528 1 10
CN657439 rt49£11.y
BY084323 BY084323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGENCOURT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BW580781
BB629098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BX678404
                                                                                                         4, 2006, 02:45:02 ; Search time 1417.59 Seconds (without alignments) 660.095 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BMS80781 B
BB629098 B
BC747032 6
BC7355037 A
BU956037 A
BE962736 6
BE962736 6
BE366891 B
CBS36691 B
CBS36691 B
CCS06690 C
CCS0690 C
CCS06690 C
CCS0690 C
CCS06690 C
CCS06690 C
CCS06690 C
CCS06690 C
CCS06690 C
CCS0690 C
CCS06690 C
CCS0690 C
CCS0690 C
CCS0690 C
CCS06
                                                                                                                                                                                                                                                                                                                            82156650
                  5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                          41078325 seqs, 23393541228 residues
                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                  GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                               nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AG856275
CZ950619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CW790508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BU956037
BE962736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CC506640
BX356727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CN657439
BY084323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BM001652
BX678404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAS77271
CO076646
CF484305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BG747032
DR735254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BX386891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CA452850
                                                                                                                                                                                                             ggggtcaacgttgagggggg 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BB629098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BY277221
                                                                                                                                                                                                                                         IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                            seq length: 0
seq length: 200000000
                                                                                                                                                                      US-10-789-758A-4
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9b_est1:*
9b_est2:*
9b_htc:*
9b_est4:*
9b_est4:*
9b_est6:*
9b_est7:*
9b_gss2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     %
Query
Match Length D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                791
1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   244
382
393
406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   May
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10:
```

ö

16.8 16.8 16.8 16.8 16.8 16.8 16.8

17

18 17.4 17.4 17.4 17.4

Result No.

```
Email: genome-res@gec.riken.jp, URL:http://genome.gec.riken.jp/
Carninci,P., Nishiyama,Y., Westover,A., Itoh,M., Nagaoka,S.,
Sasaki,Y., Okazaki,Y., Wuramatsu,M. and Hayashizaki,Y.
Thermostabilization and thermoactivetion of thermolabile enzymes by
trehalose and its application for the synthesis of full length
cDNA. Proc. Natl. Acad. Sci. U.S.A. 95 (2), 520-524 (1998)
Itoh,M., Kitsunai,T., Akiyama,J., Shibata,K., Izawa,M., Kawai,J.,
Tomaru,Y., Carninci,P., Shibata,Y., Ozawa,Y., Muramatsu,M.,
Automated filtration-based high-throughput plasmid preparation
system. Genome Res. 9 (5), 463-470 (1999)
Carninci,P. and Hayashizaki,Y.
High-efficiency full-length cDNA cloning. Methods Enzymol. 303,
19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan Tel: 81-45-503-9222
Shibata,K., Shibata,Y., Shinagawa,A., Shiraki,T., Sogabe,Y., Suzuki,H., Tagawa,A., Takahashi,F., Tanaka,T., Toya,T., Watahiki,A., Yamamura,T., Yasunishi,A., Yoshida,K., Yoshiki,A., Waramtsu,M. and Hayashizaki,Y.
RIKEN Mouse ESTS (Aizawa,K. et al. 2000)
Unpublished (2000)
Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone lib="RIKEN full-length enriched, adult male epididymis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87.0%; Score 17.4; DB 2;
94.7%; Pred. No. 7.6e+02;
ive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'tissue_type="epididymis"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
/clone="9230105E24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            further details.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /dev_stage="adult"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              134 GGGTCAACTTTGAGGGGG 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 94.7
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BW580781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                      ism inverse in the sequence of the sequence of
                                                                                                       GSS 11-AUG-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 30-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Buarchontoglires, Glires, Rodentia, Sciurognathi, Muroidea, Muridae, Murinae, Mus. 1 (bases 1 to 260)
1 (bases 1 to 260)
2 Azawa, K., Akahirata, S., Akimura, T., Arai, A., Arakawa, T., Carninci, P., Hanagaki, T., Hayatsu, N., Hiraoka, T., Hirozane, T., Hodoyama, Y., Imoreni, K., Ishii, Y., Itoh, M., Izawa, M., Kawai, J., Konno, H., Kusakabe, M., Matsuyama, T., Mishi, K., Nomura, K., Numazaki, R., Okazaki, A., Okido, T., Owa, C., Sakai, C., Sakai, K., Sasaki, D., Sato, K.,
                                                                              265595 Tomato EcoRI BAC Library Lycopersicon esculentum genomic clone SL EcoRI0050D17 3, genomic survey sequence. C2950619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BBS84327 RIKEN full-length enriched, adult male epididymis Mus musculus cDNA clone 9230105E24 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90.0%; Score 18; DB 10; Length 905
100.0%; Pred. No. 4.5e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Lycopersicon esculentum"
/mol type="Genomic DNA"
/mol type="Genomic DNA"
/culfivar="Heinz 1706"
/db xref="taxon:4081"
/lob_host="E. Coli"
/lob_host="E. Coli"
/clone lib="Tomato EcoRI BAC Library"
/note="Vector: unk; Site_1: EcoRI"
                                                                                                                                                                                                                                                                                    Lycopersicon esculentum (Solanum lycopersicum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               331 GGGGTCAACGTTGAGGGG 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGGTCAACGTTGAGGGG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB584327.1 GI:11480871
                                                                                                                                                                                                                              CZ950619.1 GI:72293351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                           RESULT 2
CZ950619/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
BB584327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
```

ð

ô

Gaps

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG747032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
BG747032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bukaryota; Mutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Murinae; Mus.
Sciurognathi; Muroidea; Murinae; Mus.
B 1 (bases 1 to 708)
B Arakawa, T., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T.,
Hara, A., Hiramoto, K., Hori, F., Ishii, Y., Ito, M., Kawai, J.,
Konno, H., Koda, M., Koya, S., Mateuyama, T., Miyazaki, A., Nomura, K.,
Ohno, M., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T.,
Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F.,
Takeda, Y., Tanaka, T., Toya, T., Muramatsu, M. and Hayashizaki, Y.
RIKEN Mouse ESTS (201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="egg"
/clone_lib="Yutaka Satou unpublished cDNA library (ceef1)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BB629098 RIKEN full-length enriched, 16 days neonate cerebellum Musmusculus cDNA clone 9630050J24 5', mRNA sequence.
  EST 31-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                      Ciona savignyi
Ciona savignyi
Eukaryota,
Eukaryota, Metazoa, Chordata, Urochordata, Ascidiacea, Enterogona,
Phlebobranchia, Cionidae, Ciona.
1 (bases 1 to 673)
1 (bases 1 to 673)
2 (bases 1 to 674)
3 (ciona savignyi (Yamada, Satoh, Satou)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
1-8-18-18-45-503-922
Fax: 81-45-503-922
Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bmail: genome-res@gec.riken.jp, URL:http://genome.gsc.riken.jp/
Carninci,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K.,
Itoh,M., Konno,H., Okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
BW580781
BW580781 Yutaka Satou unpublished cDNA library (csef1) Ciona
savignyi cDNA clone csef010j23 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 17.4; DB 5; Length 673;
Pred. No. 8.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                     Sakyo-ku, Kyoto, Kyoto 606-8502, Japan
Tel: 81-75-753-4095
Fax: 81-75-705-1113
Email: yutakagascidian.zool.kyoto-u.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .673
/organism="Ciona savignyi"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/db_xref="taxon:51511"
/clone="csef010j23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  599 GGGTCAACGTTGGGGGG 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGGTCAACGTTGAGGGGG 19
                                                                                            BW580781.1 GI:51761215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB629098.1 GI:16466342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87.0%;
94.7%;
                                                                                                                                                                                                                                                                                                                                    Contact: Yutaka Satou
Department of Zoology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 94.7
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                 Kyoto University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BB629098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
BB629098/c
  LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
COMMENT
                                                                     ACCESSION
                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
```

ઠે a

```
RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
Komno, H., Pukunishi, Y., Shibata, K., Itoh, M., Carninci, P., Sugahara, Y. and Hayashizaki, Y.
Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001)
Kondo, S., Shinagawa, A., Satco, T., Kiyosawa, H., Yamanaka, I., Aizawa, K., Fukuda, S., Hara, A., Itoh, M., Kawai, J., Shibata, K. and Hayashizaki, Y.
Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences. Mamm. Genome. 12, 673-677 (2001)
Please visit our web site (http://genome.gsc.riken.go.jp) for further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BG747032 15-WAY-2001
602704423F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:4857797 5',
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)
wagi,K., Pujwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M., Yonada,Y., Ishikawa,T., Ozawa,K., Tanaka,T., and Hayashizaki,Y., and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone lib="RIKEN full-length enriched, 16 days neonatecerebellum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87.0%; Score 17.4; DB 2; 94.7%; Pred. No. 8.6e+02; iive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="cerebellum"
/dev_stage="16 days neonate"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
1. .708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="9630050J24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                699 GGGGTCAACGTTTAGGGGG 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGGTCAACGTTGAGGGGG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG747032.1 GI:14057685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e mouse tissues.
```

```
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BU956037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 8
BU956037/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                       PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SM Triticum aestivum

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnollophyta; Liliopsida; Poales; Poaceae;

Pooideae; Triticeae; Triticum.

1 (bases 1 to 868)

Allaci,F., Crosby,W.L., Danyluk,J., Budes,F., Frick,M., Gaudet,D.,

Genswein,B., Graf,R., Gullck,P., Hrycan,L.D., Laroche,A.,

Links,M.G., McCarthy,E.L., Monroy,A., Muzak,I., Nilson,D.,

Penniket,C., Roach,J.L. and Sarhan,F.

Punctional Genomics of Abiotic Stress In Wheat and Canola Crops

Contact: Patrick Gulick

Plant Molecular Biology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organiam="Homo sapiens"
//organiam="Homo sapiens"
//organiam="mRNA"
//organiam="mRNA"
//organiam="taxon:9606"
//olone="InAGE:4857797"
//issue=type="adenocarcinoma cell line"
//ab.hose="mB108 (phage-resistant)"
//lone lib="NH108 (phage-resistant)"
//olone lib="NH40 (15"
//olone lib="NH40 (15"
//orde="organ: colon; Vector: porB7; Site 1: XhoI; Site 2:
//ore="organ: colon; Vector: porB7; Site 1: XhoI; Site 2:
//orde="organ: colon; Vector: priming Directionally
cloned into BcoRI/XhoI sites using the following 5;
adaptor: GGCACGAG (G). Size=selected >S00bp for average
insert size 1: 8kb. Library constructed by Ling Hong in
the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis Xit
(Stratagene) and Superscript II RT (Life Technologies)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DR735254 Triticum aestivum PGAS: Library 3 Gate 6 Triticum aestivum cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                    Hominidae; Homo.

I (bases I to 737)

NIH-MGC http://mgc.nci.nih.gov/.

NIH-MGC http://mgc.nci.nih.gov/.

L Uppublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov
Tisaue Procurement: ATC

CONA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Preparation: Ling Hong/Rubin Laboration (LLNL)

DNA Sequencing by: NIH Intramural Sequencing Center

Clone distribution: MGC clone distribution information can be found through the I.M. AG.B. Consortium/LLNL at:

Licklill cow: n column: 06

High quality sequence stop: 727.

High quality sequence stop: 727.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Concordia University, Department of Biology
7141 Sherbrooke St. West, Montreal, Quebec H4B 1R6, Canada
Tel: 514 848 244 Ext 3407
Fax: 514 948 2881
Email: pgulickelcor.concordia.ca
This sequence is the direct result of the Base calling software
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
dammalia; Butheria; Buarchontoglires; Primates; Catarrhin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match

87.0%; Score 17.4; DB 2; Length 737;

Best Local Similarity 94.7%; Pred. No. 8.7e+02;

Matches 18; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Triticum aestivum (bread wheat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             666 GGGTCAACTTTGAGGGGGG 684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DR735254.1 GI:70962058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DR735254
LOCUS
                                                         REFERENCE
                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

```
/USD LINEAR TILLICUM ABSLIVUM
/MO1 type="mRNA"
/MD xref="mRNA"
/Glone lib="rriticum aestivum FGAS: Library 3 Gate 6"
/Glone lib="rriticum aestivum FGAS: Library 3 Gate 6"
/Glone lib="rriticum aestivum FGAS: Library 3 Gate 6"
/Glone libe" rriticum aestivum FGAS: Library 3 Gate 6"
/Glone libe" real-constant and should a constructing the library; 7 day non-acclimated roots, 1,
23, and 53 days cold-acclimated at 4C, and 30 minutes, 3
hours and 6 hours treated roots with 200mM NaCl.
Non-acclimated and cold-acclimated plants were grown in
vermiculite while salt stressed plant were grown in
vermiculite while salt strand synthesis in this library was
done in the presence of methylated dCTP thereby protecting
from internal cleavage with Notl."
Phred (default parameters). It is the raw base calls. To aid in the identification of the high quality insert the software Lucy (default parameters) has been run on this sequence. Lucy identified the region [113,315]. Prow: L. column: 17. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BU956037 957 bp mRNA linear EST 21-OCT-2002 AGENCOURT 10621227 NIH MGC_107 Homo sapiens cDNA clone IMAGE:6729514 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA Library Preparation: Rubin Laboratory
CDNA Library Preparation: Rubin Laboratory
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
Plate: LLCM3052 row: n column: 09
High quality sequence stop: 569.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 957)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="adenocarcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH MGC_107"
/note="Organ: Dreast', Vector: pOTB7; Site_1: EcoR1;
Site_2: Xhol; cDNA made by oligo-dT priming.
Directionally cloned into EcoR1/Xhol sites using the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 87.0%; Score 17.4; DB 8; Length 868; Best Local Similarity 94.7%; Pred. No. 8.9e+02; Matches 18; Conservative 0; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                 /organism="Triticum aestivum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6729514"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              621 GGGGTCAACGTCGAGGGG 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGGTCAACGTTGAGGGGG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BU956037.1 GI:24185609
```

```
cDNA clone CS0DB006YB08 3-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 85.0
Best Local Similarity 89.5
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC506640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC506640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC506640/c
LOCUS
                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
following 5' adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH_MGC Library."
                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                   BE962736 12-DEC-2000 1244 bp mRNA linear EST 14-DEC-2000 601656126R1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3855702 3',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BX386891 787 bp mRNA linear EST 26-APR-2004 BX386891 Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:3855702"
/tissue_type="adenocarcinoma"
/tissue_type="adenocarcinoma"
/tab_hogt="DH10B (phage-resistant)"
/clone_lib="NHH MGC 66"
/note="Organ: ovary; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.8 kb. Library constructed by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
On Oct 3, 2000 this sequence version replaced gi:10573441.
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: DCTD/DTP
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: The T.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: The T.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov.ac.d.column: 07
High quality sequence stops: 61.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae, Homo.

1 (bases 1 to 1244)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87.0%; Score 17.4; DB 2; Length 1244; ilarity 94.7%; Pred. No. 9.3e+02; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                           Score 17.4; DB 5; Length 957; Pred. No. 9e+02;
                                                                                                                                                                                   Indels
                                                                                                                                                                                   1;
                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            874
                                                                                                                                                                                                                                                                 673 GGGGTCAACGTTGAGGGTG 655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                           1 GGGGTCAACGTTGAGGGGG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                     BE962736.2 GI:11765940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rechnologies.
                                                                                                                                           87.0%;
94.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        892 GGGTCAACGCTGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                            Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                    BE962736/c
                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BX386891
                                                                                                                                                                                                                                                                                                                               RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                   ORIGIN
                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                           δ
```

```
On May 8, 2018 this sequence version replaced gi:30447483.

Contact: Genoscope
Genoscope - Centre National de Sequencage
Genoscope - Centre National de Sequencage
Small: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr
1st strand cDNA was primed with a Not1-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCWWSpORT 6 vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GSS 17-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pecora; Bovidae; Bovinae; Bos.

1 (bases 1 to 791)

Holt, R., Stott, J., Yang, G., Barber, S., Smailus, D., Prabhu, A.-L.,
Taai, M., Cloutier, A., Lee, D., Girn, N., Olson, T., Mayo, M.,
Butterfield, Y., Kirkpatrick, R., Liu, J., Guin, R., Chan, A., Chiu, R.,
Mathewson, C., Wye, N., Masson, A., Brown-John, M., Jones, S.,
Schein, J., Marra, M., de Jong, P., McWilliam, S., Barris, W.,
Boltymple, B.P. and Tellam, R.
Bovine, BAC, End Sequences from Library CHORI-240, PLATES 294 to 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /tissue type="NEUROBLASTOMA COT 10-NORMALIZED"
/clone lib="Homo sapiens NEUROBLASTOMA COT 10-NORMALIZED"
/note="lst strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Laurasiatheria, Cetartiodactyla, Ruminantia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CH240 348M23.T7 CHORI-240 Bos taurus genomic clone CH240_348M23, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSlDB002ZD07NPl&c=8682.f. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 17; DB 5; Length 787;
Pred. No. 1.4e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                   Li.W.B., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished (2003)
Other GSSs: CH240_348M23.TARBAC13P2
Contact: Rob Holt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  791 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="CS0DB006YB08"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGGTCAGCSTTGAGGGGG 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGGTCAACGTTGAGGGGG 19
BX386891
BX386891.2 GI:46571903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CC506640.1 GI:31824933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85.0%;
                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                       Hominidae, Homo.
1 (bases 1 to 787)
```

Gaps

; 0

Bource

FEATURES

EST 12-NOV-2002

```
Thotae Torgan: immature ear; Vector: pAD-GAL4; Site 1:
BCORI; Site 2: XhOI; Schmidt lab dissected immature ears
between 0.5 cm - 2.0 cm. Sharon Stanfield prepared the
CDNA library in HybrizAP. Positive selection by probing
with the pooled full-length cDNA of the following MADS box
genes: ZAGL9B, ZAGL17, SI, ZAG1, ZAG1, ZAG1, ZANIA,
ZAM2, and ZPLA. Negative selection by probing with pooled
3'-end fragments of the same DNA. The final library is
derived from a total of 210 selected plaques that
the 3'-end cDNA probes."
                                            /db_xref="taxon.g606"
/db_xref="taxon.g606"
/clone="CSODIO16Y114"
/tissue type="PLACENTA COT 25-NORWALIZED"
/clone lib="Homo sapiens PLACENTA COT 25-NORWALIZED"
/note="lst strand cDNA was primed with a NotI-oligo (dT)
primer: Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopaida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:4577"
/tissue_type="ear"
/tissue_type="ear"
/dev_stage="0.5 cm - 2.0 cm"
/lab_host="XLOLR"
/lab_host="XLOLR"
/clone_lib="3528 - Positive selection of MADS-box genes from ear library 946"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CM452850 10 1 F12.x 1 3528 - Positive selection of MADS-box genes from ear library 946 Zea mays CDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Walbot,V.
Maize ESTs from various cDNA libraries sequenced at Stanford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 196;
                                                                                                                                                                                                                                                                                                                                            Score 17; DB 5; Length 1008; Pred. No. 1.4e+03;
                                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              855 California Ave, Palo Alto, CA 94304, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             84.0%; Score 16.8; DB 6; 90.0%; Pred. No. 1.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            column: 12.
                                                                                                                                                                                                                                                                                                                                                                                                       1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Walbot V
Department of Biological Sciences
Stanford University
organism="Homo sapiens"
mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Zea mays"
/mol_type="mRNA"
/cultivar="OH43"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: 650 723 2227
Fax: 650 725 8221
Email: walbocdetanford.edu
Plate: 3528 1 10 1 row: F c
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 111 GGGGTCAGCSTTGAGGGG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CA452850.1 GI:24934632
                                                                                                                                                                                                                                                                                                                                               85.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 196)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                       17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zea mays
Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 13
CA452850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genoscope - Centre National de Sequencage
2 rue Gaston Cremieux, CP 5706 - 91057 EWRY cedex - FRANCE
Email: seqref@genoscope.cns.fr, Web : www.genoscope.cns.fr
1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime
end enriched, double-strand cDNA was digested with Not I and cloned
into the Not I and EcoR V sites of the pCMVSDORT & vector. Library
was normalized. Library was constructed by Life Technologies, a
division of Invitrogen. This sequence belongs to sequence cluster
                                                                                                                                                                                                   (http://www.chori.org/bacpac/bovine240.htm). For BAC library availability, please contact Pieter de Jong (pdejong@mail.cho.org). Clones may be purchased from BACPAC Resources (http://www.chori.org/bacpac/ordering_information.htm). This work was undertaken as part of the International Bovine BAC Mapping Consortium (IBBMC) by CSIRO Livestock Industries, Australia and the British Columbia Genome Sciences Centre, Canada.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BX356727 BX356727 HOMO Sapiens PLACENTA COT 25-NORMALIZED HOMO Sapiens CDNA clone CSODIO16X114 3-PRIME, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /call_type="Blood"
/clone lib="CHORL-240"
/note="Vector: PTARBACI.3; Site 1: Mbol; Site 2: Mbol;
Hereford bull Li Domino 99375; CHORL-240 Bovine BAC
library (Male) produced by Pieter de Jong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                          The British Columbia Cancer Agency Genome Science Centre 600 W. 10th Ave, Vancouver, British Columbia, Canada V52 4E6 Tel: 604-877-6285
Fax: 604-877-6276
Email: rholt@bcgsc.ca
Clones are derived from the bovine BAC library CHORI-240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        For more information about this cluster, see http://www.genoscope.cns.fr/cdna?s=CSODI016BE07NP1&c=8682.f. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         On May 5, 2003 this sequence version replaced gi:30374084.
Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 791;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hominidae, Homo.

1 (bases 1 to 1008)

Lil, W. B., Gruber, C., Jessee, J. and Polayes, D.

Unil-length cDNA libraries and normalization
Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85.0%; Score 17; DB 9; Lei
llarity 100.0%; Pred. No. 1.4e+03;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="genomic DNA"
/strain="breed: Hereford"
/db_xref="taxon:9913"
/clone="CH240_348M23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Bos taurus"
                                                                                                                                                                                                                                                                                                                                                                                                          Plate: 348 row: M column: 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BX356727.2 GI:46304629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 779 édrcaacerreaceces 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 GGTCAACGTTGAGGGGG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 17; Conserv
```

VERSION KEYWORDS SOURCE ORGANISM

AUTHORS TITLE JOURNAL

COMMENT

REFERENCE

LOCUS

RESULT 12

BX356727

ACCESSION

source

FEATURES

Matches

RESULT 14 CN657439/c LOCUS

셤

ઠે

ACCESSION VERSION KEYWORDS

ORGANISM

SOURCE

REFERENCE AUTHORS

TITLE JOURNAL COMMENT

```
Schurghardi, mutricae; mutrice; mus.

Schurghardi; mutricae; mutrice; mus.

Nikaido, I., Gasto, N., Saito, R., Suzuki, I., Yamanaka, I.,

Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A.,

Schonbach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C.,

Hume, D.A., Quackenbush, J., Schriml, L.M., Kanapin, A.,

Batalov, S., Beisel, K.W., Blake, J.A., Bradt, D., Brusic, V.,

Rhue, D.A., Guackerbush, J., Schriml, L.M., Kanapin, A.,

Rhue, D.A., Guackerbush, J., Schriml, L.M., Kanagani, T.A.,

Fletcher, C.F., Forrest, M., Frazer, K.S., Gaasterland, T.,

Gariboldi, M., Gissi, C., Godzik, A., Gough, J. Grimmond, S.,

Kawaji, H., Kawasawa, Y., Kedzierski, R.M., King, B.L., Konagaya, A.,

Kurochkin, I.V., Lee, Y., Lenhard, B., Lyons, P.A., Maglott, D.R.,

Numata, K., Okido, T., Pavan, W.J., Pertea, G., Pesole, G.,

Ravasi, T., Marchiconi, L., Wackazie, L., Miki, H., Nagashima, T.,

Numata, K., Okido, T., Pavan, W.J., Pertea, G., Pesole, G.,

Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K.,

Sandelin, A., Schneider, C., Semple, C.A., Setou, M., Shimada, K.,

Werls, C., Wilming, L.G., Wynshaw-Boris, A., Yanagisawa, M., Yang, I.,

Yang, L., Yuan, Z., Zavolan, M., Zhu, Y., Zalmer, A., Carninci, P.,

Hayatsu, N., Hirozane-Kishikawa, T., Yakai, K., Canabe, Y.,

Rakaka, T., Pukuda, S., Hara, A., Hashizune, W., Inchan, M.,

Sakazume, N., Sato, K., Shiraki, T., Waki, K., Kawai, J., Aizawa, K.,

Shinagawa, T., Pukuda, S., Hara, A., Hashizune, W., Inchan, M., Sato, K., Shiraki, Y.,

Rhals, See Sander, C., Sasaki, C., Sasaki, D., Shibata, K.,

Rogers, J., Birray, E. and Hayashizaki, Y.,

Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Yeafing Hayabilzaki
Laboratory for Genome Exploration Research Group, RIKEN Genomic
Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
Tel: 81-45-503-9216
Fax: 81-45-503-9216
Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/
Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S.,
Hirozante,T., Imotani,K., Ishhi,Y., Itoh,M., Kawai,J., Konno,H.,
Miyazaki,A., Murata,M., Nakamura,M., Nomura,K., Numazaki,R.,
Ohno,M., Sakai,K., Sakazume,N., Sasaki,D., Sato,K., Shibata,K.,
Shiraki,T., Tagami,M., Waki,K., Watahiki,A., Muramatsu,M. and
Hayashizaki,Y. Direct Submission
Computational Analysis of Full-Length Mouse cDNAs Compared with
Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new
genes. Genome Res. 10 (10), 1617-1630 (2000)
RIKEN integrated sequence analysis (RISA) system-384-format
sequencing pipeline with 384 multicapillary sequencer. Genome Res.
10 (10), 157-1771 (2000)
BY084323 RIKEN full-length enriched, 16 days embryo whole body Mus musculus cDNA clone K630047M11 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKBN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                           Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                          Mus musculus (house mouse)
                                                                                                                                                                BY084323.1 GI:26194370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12466851
        LOCUS
DEFINITION
                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                       ACCESSION
                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Vector: pCRII-TOPO (Invitrogen); Site_1: 5': ECORI; Site_2: 3': ECORI; The library was constructed by Irina Site_2: 3': ECORI; The library was constructed by Irina (mmitrevadwatson.wustl.edu) at Washington University, St. Louis. Oligo(dT)-SL2b PCR based library. Pristionchus pacificus mixed stage cDNA PCR products of size >400 nucleotides containing SL2b (GGTTTTAACCAGTATCTCAAG) on the 5' end and oligo(dT) on the 3' end were non-directionally cloned into pCRII-TOPO(Invitrogen) following the Topo TA cloning protocol."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
            ö
                                                                                                                                                                                                                                                                                                                                                             EST 17-MAY-2004
                                                                                                                                                                                                                                                                                                                                                         CN657439

**CN657439

**L4 bp mRNA linear EST 17-MAY-2004*

**L45fEll, Y1 Pristionchus pacificus mixed stage SL2b TOPO v1

Pristionchus pacificus CDNA 5, similar to SW:RLAL_CAEBL P91913 605

ACIDIC RIBOSOMAL PROTEIN P1. ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="Mixed"
/lab_host="DH10B"
/clone_lib="Pristionchus pacificus mixed stage SL2b TOPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             McCarter, J., Clifton, S., Chiapelli, B., Pape, D., Martin, J., Wylie, T., Dante, M., Marra, M., Hillier, L., Kucaba, T., Theising, B., Bowers, Y., Gibbons, M., Ritter, B., Bennett, J., Franklin, C., Tsagareishvili, R., Ronko, I., Kennedy, S., Maguire, L., Beck, C., Underwood, K., Steptoe, M., Allen, M., Person, B., Swiller, T., Harvey, N., Schurk, R., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., The Washington Univ. Nematode EST Project, 1999
Contact: McCarter JP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: est@watson.wustl.edu
Library constructed by: Irina Ronko and Dr. Makedonka Mitreva
Trace considered overall poor quality
Seq primer: SL2b primer
High quality sequence stop: 1.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The Washington Univ. Nematode EST Project, 1999
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
TEL: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Nematoda; Chromadorea; Diplogasterida;
Neodiplogasteridae; Pristionchus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 90.0%; Pred. No. 1.5e+03;
Matches 18; Conservative 0; Mismatches 2; Indels
            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Organism="Pristionchus pacificus"
mol_type="mRNA"
db_xref="taxon:54126"
            7
    0; Mismatches
                                                                                                                       160 GGGGTCAATCTTGAGGGGGG 179
                                                                                  1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43 GGCTCAACGGTGAGGGGG 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CN657439.1 GI:47423890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pristionchus pacificus
Pristionchus pacificus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (bases 1 to 244)
    18; Conservative
```

source

FEATURES

prepare mouse tissues.

RESULT 15 BY084323/c

ò ద

ORIGIN

Search completed: May 4, 2006, 07:17:48 Job time: 1421.59 secs

දි දි

```
24
                                                                                                                                           May 4, 2006, 07:24:16; Search time 298.851 Seconds (without alignments) 553.412 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Published Applications NA Main:*

1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US09A_PUBCOMB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
6: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
8: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                             19587084
                      5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                9793542 seqs, 4134689005 residues
                      GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                     - nucleic search, using sw model
                                                                                                                                                                                                                                                                           1 gggggcaacgttgagggggg 20
                                                                                                                                                                                                                                                                                                                IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                            US-10-789-758A-4
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                     OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database:
                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                               Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	Sequence 436, App		Sequence 12, Appl	Sequence 519, App	767,	968,		Sequence 3, Appli	513	•	968,	Sequence 969, App	25,	29,	496,	740,	923,		767,	968,	696	47, 7	89
SUMMARIES	US-09-888-326-436	US-09-888-326-437	US-09-818-918-12	US-09-776-479-519	US-09-776-479-767	US-09-776-479-968	US-09-776-479-969	US-09-967-464-3	US-09-776-479-519	US-09-776-479-767	US-09-776-479-968	US-09-776-479-969	US-09-965-101-52	US-09-965-101-59	US-10-112-653-496	US-10-112-653-740	US-10-112-653-923	US-10-017-995-519	US-10-017-995-767	US-10-017-995-968	US-10-017-995-969	US-10-161-229-47	US-10-194-035-89
th DB	20 3	20 3	20 3	20 3	20 3	20 3	20 3	20 3	20 3	20 3	20 3	20 3	20 3	20 3	20 5	20 5	20 5	20 5	20 5	20 5	20 5	20 5	20 6
å Query Match Length	0.00	0.001	0.001	100.0	100.0	0.001	100.0	100.0	0.001	0.0	100.0	100.0	0.0	100.0	0.001	100.0	0.0	100.0	100.0	100.0	0.001	100.0	0.0
	100	100	100	100	•		100	100	ĕ	100	100							100			100	707	100
Score	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Result No.	п	7	m	4	S	9	7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23

١,

Sequence 12, Appl Sequence 12, Appl Sequence 12, Appl Sequence 519, App Sequence 767, App Sequence 968, App Sequence 12, Appl Sequence 14, Appl Sequence 169, Appl Sequence 169, Appl Sequence 161, Appl	body-Induced ancer phosphodiester backbone , and 3' ends	<pre>Length 20; Indels 0; Gaps 0; -Induced r</pre>
24 20 100.0 20 6 US-10-224-523-35 25 20 100.0 20 6 US-10-187-264A-12 26 20 100.0 20 6 US-10-187-264A-12 28 20 100.0 20 6 US-10-314-578-519 29 20 100.0 20 6 US-10-314-578-968 31 20 100.0 20 6 US-10-314-578-968 31 20 100.0 20 6 US-10-314-578-969 31 20 100.0 20 6 US-10-314-578-969 32 20 100.0 20 6 US-10-314-578-969 33 20 100.0 20 7 US-10-455-247-3 34 20 100.0 20 7 US-10-455-247-3 35 20 100.0 20 7 US-10-713-625-12 36 20 100.0 20 7 US-10-713-625-12 37 20 100.0 20 7 US-10-769-212 38 20 100.0 20 7 US-10-817-165-12 39 20 100.0 20 8 US-10-817-778-519 41 20 100.0 20 8 US-10-831-778-968 42 20 100.0 20 8 US-10-831-778-969 43 20 100.0 20 8 US-10-831-778-969 44 20 100.0 20 8 US-10-831-778-969 45 20 100.0 20 8 US-10-831-778-969 46 20 100.0 20 8 US-10-831-778-969 47 20 100.0 20 8 US-10-831-778-969 48 20 100.0 20 8 US-10-831-778-969 49 20 100.0 20 8 US-10-831-778-969 40 20 100.0 20 8 US-10-831-778-969	ALIGNMENTS 326-436 9.436 Application US/0988326 1.050 NO. US20030026801A1 INFORMATION: WIT: Wainer, George WIT: Wathramn, Gunther INTERINCE: C1039/7052 (MAS) RETREMENE: C1039/7052 (MAS) RETREMES: C1039/7052 (MAS) RETREMES: C1039/7052 (MAS) RETREMES: C1039/7052 (MAS) RETREMES: C1030/7052 (MAS) RETREMES: C1020/06-22 OF SEQ ID NOS: 848 RE: FRESEQ for Windows Version 3.0 NOS: 848 RE: RESEC for Windows Version 3.0 NOS: 848 RE: RESECT FOR WINDOWS (NOS) RE: NOS: 848 RE: RESECT FOR WINDOWS (NOS) RE: RESECT FOR WINDOWS (NOS) RE: NOS: 848 RE: RESECT FOR WINDOWS (NOS) RE: NOS: 848 RE: NOS: 848 RE: NOS: 848 RE: RESECT FOR WINDOWS (NOS) RE: NOS: 848 RE: RESECT FOR WINDOWS (NOS) RE: NOS: 848 RE: RESECT FOR WINDOWS (NOS) RE: RESECT FOR WINDOWS (NOS) RE: NOS: 848 RE: RESECT FOR WINDOWS (NOS) RE: NOS: 848 RE: RESECT FOR WINDOWS (NOS) RE: RE: RESECT FOR WINDOWS (NOS) RE: RESECT FOR WINDOW	Query Match 100.0%; Score 20; DB 3; Length 2 Best Local Similarity 100.0%; Pred. No. 4; No. 4; Indels Agachaear 20; Conservative 0; Nismatches 0; Indels Qy 1 GGGGTCAACGTTGAGGGGG 20 Indels Pb 1 GGGGTCAACGTTGAGGGGG 20 Indels RESULT 2 US-0988-326-437 Sequence 437, Application US/0988326 Publication No. US20030026801A1 FERNEAL INFORMATION: GENERAL INFORMATION: George APPLICANT: Weiner, George APPLICANT: Weiner, George TITLE OF INVENTION: Methods for Enhancing Antibody-Induced TITLE OF INVENTION: Cell Lysis and Treating Cancer

```
1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
US-09-776-479-968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
US-09-776-479-767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-776-479-767
                                                                                                                                                                                                            SEQ ID NO 519
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-818-918-12

Sequence 12, Application US/09818918

Publication No. US2030050261A1

GENERAL INFORMATION:
APPLICANT: Kiline, Joel N.
APPLICANT: Kiline, Joel N.
TILLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPERENCE (1039/7048 (AMS))
CURRENT APPLICATION UNBER: US/09/818,918

CURRENT FILING DATE: 2001-03-27

CURRENT FILING DATE: 1994-07-15

PRIOR PILING DATE: 1994-07-15

PRIOR APPLICATION NUMBER: US 08/386,063

PRIOR PILING DATE: 1996-10-30

NUMBER OF SEQ ID NOS: S6

SEQ ID NO 12

LENGTH: 20

TENGER NAME
TO BE NAME OF SEQ FOR WINDOW VETSION 3.0

LENGTH: 20

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 4; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 4; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                 ) THER INFORMATION: Synthetic oligonucleotide; NAME/KEY: misc_feature; LOCATION: (0)...(0); COTHER INFORMATION: phosphorothioate backbone US-09-888-126-437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Synthetic oligonucleotide US-09-818-918-12
FILE REFERENCE: C1039/7052 (AMS)
CURRENT APPLICATION NUMBER: US/09/888,326
CURRENT FILING DATE: 2001-06-22
FRIOR APPLICATION NUMBER: US 60/213,346
FRIOR FILING DATE: 2000-06-22
NUMBER OF SEQ ID NOS: 848
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 437
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 519, Application US/09776479
Publication No. US20030087848A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Bratzler, Robert L. APPLICANT: Petersen, Deanna M. APPLICANT: Fouron, Yves
                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
US-09-776-479-519
                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Bratzler, Robert L.
APPLICANT: Bratzler, Robert L.
APPLICANT: Petersan, Deanna M.
APPLICANT: Fouron, Yves
TITLE OF INVENTION: Treatment of Aethma and Allergy
FILE REFERENCE: C1037/7013 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/776,479
CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: US 60/179,991
PRIOR PELLING DATE: 2000-02-03
NUMBER OF SEQ ID NOS: 1093
SOFTWARE: FastSEQ for Windows Version 3.0
IENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 968, Application US/09776479

Publication No. US20030087848A1

GENERAL INFORMATION:

APPLICANT: Brateler, Robert L.

APPLICANT: Petersen, Deanna M.

APPLICANT: Pouron, Yves

TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: Treatment of Asthma and Allergy
FILE REFRENCE: C1037/7013 (HCL/MAT)

FILE REPRENCE: C1037/7013 (HCL/MAT)

CURRENT APPLICATION NUMBER: US/09/776,479
TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: Treatment of Asthma and Allergy FILE REFERENCE: C1037/7013 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/776,479
CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: US 60/179,991
PRIOR PILING DATE: 2000-02-03
PRIOR FILING DATE: 2000-02-03
PRIOR FILING DATE: 2000-02-03
SOFTWARE: FRASESQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4; 0; Indels ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 3; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; DB
100.0%; Pred. No. 4;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Synthetic Sequence US-09-776-479-519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 767, Application US/09776479
Publication No. US20030087848A1
GENERAL INFORMATION:
```

```
US-09-776-479-519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-776-479-767
                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Dubensky, Jr., Thomas W.
TITLE OF INVENTION: MICROPARTICLES FOR DELIVERY OF HETEROLOGOUS NUCLEIC ACIDS
FILE REFERENCE: PP16269.004
                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 369, Application US/09776479; Sequence 369, Application US/09776479; Publication No. US20030087848A1; GENERAL INFORMATION:

APPLICANT: Bratzler, Robert L.; APPLICANT: Petersen, Deanna M.; APPLICANT: Pouron, Yves

TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: URatement of Asthma and Allergy FILE REFERENCE: C1037/7013 (HCL/MAT); CURRENT APPLICATION NUMBER: US/09/776,479; CURRENT FILING DATE: 2000-02-03; NUMBER OF SEQ ID NOS: 1093; SOFTWARE: FastSEQ for Windows Version 3.0; LENGTH: 20
                                                                                                                                                                                                                                                                                 100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 4;
Matches 20; Conservative 0; Mismatches 0; Indels
                                            NUMBER OF SEQ ID NOS: 1093
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 968
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/967,464
CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: US 60/179,991
PRIOR FILING DATE: 2000-02-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
CTHER INFORMATION: Synthetic Sequence
US-09-776-479-969
                                                                                                                                                                                                         OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/09967464
Publication No. US20030138453A1
GENERAL INFORMATION:
APPLICANT: O'Hagan, Derek
APPLICANT: Otten, Gillis
APPLICANT: Donnelly, John J.
APPLICANT: Barnett, Sugan
APPLICANT: Singh, Mamohan
APPLICANT: Singh, Mamohan
APPLICANT: Ulmer, Jeffrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/236,105
                                                                                                                                                                                                                                                                                                                                                                              1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                       TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                       Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                  US-09-776-479-968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-776-479-969
                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 519, Application US/09776479
; Bublication No. US20040067902A9
; GENERAL INFORMATION:
; APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: UNMBER: US/09/776,479
; CURRENT APPLICATION NUMBER: US 60/179,991
; PRIOR FILING DATE: 2000-02-03
; NUMBER OF SEQ ID NOS: 1093
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 767, Application US/09776479;
Sequence 767, Application US/09776479;
Bublication No. US2004006790249;
GENERAL INFORMATION:
APPLICANT: Bratzler, Robert L.;
APPLICANT: Petersen, Deanna M.;
APPLICANT: Petersen, Deanna M.;
TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE:OF. INVENTION: Treatment of Asthma and Allergy;
FILE REFERENCE: C1037/7013 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/776,479;
PRIOR APPLICATION NUMBER: US 60/179,991
                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4; o; Mismatches 0; Indels
                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Artificial sequence is synthesized US-09-967-464-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 1093
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Synthetic Sequence US-09-776-479-519
PRIOR FILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: 60/315,905
PRIOR FILING DATE: 2001-08-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ecerchacerreaceces 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: Artificial Sequence
                                                                              NUMBER OF SEQ ID NOS: 68
SOFTWARE: Patentin version 3.1
SEQ ID NO 3
LENGTH: 20
                                                                                                                                                                                             TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.0
"arches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                Query Match 100.
Best Local Similarity 100.
Matches 20; Conservative
```

ð 셤

```
Gaps
                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Davis, Heather L.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schorr, Joachim
APPLICANT: Wu, Tong
TITLE OF INVENTION: Vectors and Methods for Immunization or
TITLE OF INVENTION: Therapeutic Protocols
FILE REPERENCE: C1039/7057 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/965,101
CURRENT FILING DATE: 2001-09-26
PRIOR FILING DATE: 1998-05-20
PRIOR PILING DATE: 1998-05-20
PRIOR PLILING DATE: 1999-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
SPIGNER FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Edvis, Heather L.
APPLICANT: Exieg, Arthur M.
APPLICANT: Exieg, Arthur M.
APPLICANT: Story
APPLICANT: William M.
APPLICANT: William M.
TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Therapeutic Protocols
FILE REPERENCE: C1039/7067 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/965,101
CURRENT APPLICATION NUMBER: US 09/082,649
PRIOR FILING DATE: 1998-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3; Length 20;
                                                                          DB 3; Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: synthetic oligonucleotide MAME/KEY: misc feature LOCATION: (0) ... (0) OTHER INFORMATION: Has a phosphorothioate backbone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                        Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 4;
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0%; Pred. No. 4
Matches 20; Conservative 0; Mismatche
; OTHER INFORMATION: Synthetic Sequence US-09-776-479-969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 59, Application US/09965101; Publication No. US20040186067A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                        Sequence 52, Application US/09965101
Publication No. US20040186067A1
GENERAL INFORMATION:
                                                                                                                                                                                  1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                  1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 14
US-09-965-101-59
                                                                                                                                                                                                                                                                                                          RESULT 13
US-09-965-101-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-965-101-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 52
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          à
                                                                                                                                                                                                                                셤
                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 969, Application US/09776479

| Sequence 969, Application No. US20040067902A9
| Publication No. US20040067902A9
| GENERAL INFORMATION:
| APPLICANT: Bratzler, Robert L. APPLICANT: Bratzler, Robert L. TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: Treatment of Asthma and Allergy FILE REPERBUES: C1037/7103 (HCL/MAT)
| CURRENT APPLICATION NUMBER: US/09/776,479
| CURRENT PILING DATE: 2001-02-02
| PRIOR FILING DATE: 2000-02-03
| NUMBER OF SEQ ID NOS: 1093
| SOFTWARE: FRANCES OF WINDOWS VERSION 3.0
| SEQ ID NO 969
| LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Bretzler, Robert L.
APPLICANT: Bretzler, Robert L.
APPLICANT: Petersen, Deanna M.
APPLICANT: Petersen, Deanna M.
APPLICANT: Pouron, Yves
TITLE OF INVENTION: Treatment of Asthma and Allergy
TITLE OF INVENTION: Treatment of Asthma and Allergy
TILE REPRENCE: C103/7013 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/776,479
CURRENT FILING DATE: 2001-02-02
PRIOR APPLICATION NUMBER: US 60/179,991
PRIOR PILING DATE: 2000-03-03
NUMBER OF SEQ ID NOS: 1093
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 4; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                        Score 20; DB 3; Length 20;
Pred. No. 4;
                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                        Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 4;
Matches 20; Conservative 0; Mismatches
                                                     TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Synthetic Sequence
US-09-776-479-767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 968, Application US/09776479 Publication No. US20040067902A9 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-776-479-968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-776-479-969
                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
US-09-776-479-968
  SEQ ID NO 767
LENGTH: 20
```

ઠે

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
PRIOR FILING DATE: 1997-05-20

NUMBER OF SEQ ID NOS: 84

SOFUTARE: PASTERO for Windows Version 3.0

SEQ ID NO 59

LENGTH: 20

TYPE: DNA

ORGANISM: Artificial Sequence
FRATURE: NAME/KEY: misc_feature

NAME/KEY: misc_feature

LOCATION: (0)...(0)

OTHER INFORMATION: Has SOS-ODN backbone with two S-linkages at the 5'

OTHER INFORMATION: in between.

US-09-965-101-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
US-10-112-653-496
is Gequence 496, Application US/10112653
is Publication No. US20030650268A1
is GENERAL INFORMATION:
is APPLICANT: Krieg, Arthur M.
is APPLICANT: Berg, Daniel J.
if TILE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR
if TILE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR
if TILE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR
if TILE REFERENCE: C01039/70060(AMS)
if CURRENT APPLICATION NUMBER: US/10/112,653
if CURRENT PILING DATE: 2002-03-29
if PRIOR FILING DATE: 2001-03-29
if NUMBER OF SEQ ID NOS: 1040
if SOFTWARE: PSELSEQ for Windows Version 3.0
if LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 4;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match

100.0%; Score 20; DB 5; Length 20;
Best Local Similarity 100.0%; Pred. No. 4;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ), OTHER INFORMATION: Synthetic Oligonucleotide US-10-112-653-496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

į

Search completed: May 4, 2006, 09:01:07 Job time: 298.851 secs

1 GGGTCAACGTTGAGGGGGG 20

셤

This Page Blank (uspto)

Sequence 933, App Sequence 1038, Ap Sequence 1040, Ap Sequence 908, App Sequence 915, App Sequence 956, App

Sequence

Sequence

Sequence 592670, Sequence 2386, Ap Sequence 37, Appl Sequence 475, Appl Sequence 930, Appl Sequence 931, Appl Sequence 931, Appl

Sequence 531288, Sequence 785514, Sequence 845021,

Sequence 598131, Sequence 1211540, Sequence 1222, Ap Sequence 414201, Sequence 480078, Sequence 1894, Ap Sequence 1894, Ap

Minimum DB seq Maximum DB seq

Database

Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Sequence Sequence

Sequence

```
APPLICANT: KITCHER, Arthur M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPRENCE: C1039/7023/HCL
CURRENT APPLICATION WUMBER: US/10/619,279
CURRENT FILING DATE: 2003-07-14
FRIOR APPLICATION NUMBER: US 08/960,774
FRIOR FILING DATE: 1997-10-30
FRIOR FILING DATE: 1997-10-30
FRIOR FILING DATE: 1995-10-30
FRIOR PLING DATE: 1995-10-30
FRIOR PLING DATE: 1995-0-07
FRIOR PLING DATE: 1995-0-07
FRIOR FILING DATE: 1995-0-07
FRIOR FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: FSSESEQ FOR WINGOWS VERSION 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
5 US-11-128-127-1

7 US-11-127-654-348

7 US-11-127-654-924

7 US-11-127-654-933

7 US-11-127-654-933

7 US-11-127-654-908

7 US-11-127-654-908

7 US-11-127-654-908

7 US-11-127-654-908

7 US-11-127-654-916

7 US-11-127-654-916

8 US-09-925-065A-391

1 US-09-925-065A-391

1 US-09-925-065A-31288

1 US-09-925-065A-845021

1 US-09-925-065A-185514

1 US-09-925-065A-185514

1 US-09-925-065A-185514

1 US-09-925-065A-185514
                                                                                                                                                                                                                                                                                                                                US-09-925-065A-414201

2 US-10-301-480-480078

1 US-10-301-480-1093487

1 US-10-932-182A-1894

1 US-10-932-182A-1894

2 US-10-33-182A-1894

2 US-10-382-825-50

4 US-11-296-572-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB 10;
100.0%; Pred. No. 0.66;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ) OTHER INFORMATION: Synthetic Oligonucleotide US-10-619-279-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12, Application US/10619279
Publication No. US20050267057A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                          Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                               615
3387
3387
20
20
20
  0000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-619-279-12
    SEQ ID NO 12
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
     υ
                                                                                                                                                                                                                                   0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                               υυ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 12, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 496, App
Sequence 923, App
Sequence 12, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1, Appli
1, Appli
                                                                                                May 4, 2006, 08:17:52 ; Search time 456.437 Seconds (without alignments) 178.449 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
                                                                                                                                                                                                                                                                                                                                                                                                                  Published Applications NA New:*

1: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq1:*
2: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*
3: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*
4: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*
5: /SIDS5/ptodata/2/pubpna/PCN NEW PUB.seq:*
6: /SIDS5/ptodata/2/pubpna/PCN NEW PUB.seq:*
7: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*
6: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*
7: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*
7: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq:*
7: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq:*
                   5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-619-279-12
US-10-435-656-12
US-10-382-82-12
US-11-286-572-12
US-11-127-654-496
US-11-127-654-740
US-11-127-654-923
US-11-127-654-957
US-11-127-654-957
US-11-127-654-957
US-11-127-654-957
US-11-127-654-12
                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                             9306428 segs, 2036268586 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                   GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                        - nucleic search, using sw model
                                                                                                                                                                                       1 ggggtcaacgttgagggggg 20
                                                                                                                                                                                                                  IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                     length: 0
length: 2000000000
                                                                                                                                                       US-10-789-758A-4
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
92.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10:
111:
12:
12:
14:
16:
16:
19:
```

ö

Gaps

ö

20 20 20 20 20 20 20 20 20 4.4.18

Result Š.

```
20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
US-11-127-654-496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-11-296-572-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                    셤
                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                           GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Klinmen, Dennis
APPLICANT: Klinmen, Dennis
APPLICANT: Klinmen, Dennis
APPLICANT: Breinberg, Alfred D.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REFERENCE: C1039/7048 (AMS)
FILE REFERENCE: C1039/7048 (AMS)
FILE REPERENCE: C1039/7048 (AMS)
FILE REPERENCE: C1039/704 (AMS)
FILE REPERENCE: US 08/276,358
FRIOR PELICATION NUMBER: US 08/276,358
FRIOR FILING DATE: 1995-02-07
FRIOR PELICATION NUMBER: US 08/386,063
FRIOR PELICATION NUMBER: US 08/386,063
FRIOR FILING DATE: 1995-02-07
FRIOR FILING DATE: 1995-10-30
NUMBER OF SEQ ID NOS: 56
SOFTWARE: FREESEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 20; DB 12; Length 20;
Pred. No. 0.66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
100.0%; Score 20; DB 10; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.66;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Klimman, Dennis
APPLICANT: Steinberg, Alfred D.
TITLE OF INVENTION: Methods for Treating and Preventing
TITLE OF INVENTION: Infectious Disease
FILE REFERENCE: Colo39:70062.US
CURRENT PELING DATE: 2003-03-06
PRIOR APPLICATION NUMBER: US 09/630,319
PRIOR APPLICATION NUMBER: US 09/630,774
PRIOR PILING DATE: 1997-10-30
PRIOR FILING DATE: 1997-10-30
PRIOR FILING DATE: 1997-10-30
PRIOR FILING DATE: 1995-02-07
PRIOR PILING DATE: 1995-02-07
PRIOR PLING DATE: 1995-02-07
PRIOR PLING DATE: 1995-02-07
PRIOR PLING DATE: 1995-02-07
PRIOR PELING DATE: 1995-02-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ) OTHER INFORMATION: Synthetic Oligonucleotide US-10-382-822-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                // FEATURE:
// OTHER INFORMATION: Synthetic oligonucleotide
US-10-435-656-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12, Application US/10382822 Publication No. US20060058251A1 GENERAL INFORMATION:
                                                     Sequence 12, Application US/10435656
Publication No. US20050277604A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -10-382-822-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 12
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

```
Sequence 496, Application US/11127654

Sequence 496, Application US/11127654

Sequence 496, Application US/11127654

Bublication No. US20050250726A1

GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

APPLICANT: Berg, Daniel J.

TITLE OF INVENTION: INFLAMMATORY DISEASES

FILE REFERENCE: C103-12

CURRENT APPLICATION NUMBER: US 60/279,642

PRIOR FILING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFTWARE: PATENTIN VETSION 3.2

SEQ ID NO 496

LENGTH: 20
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
Gaps
                                                                                                                                                                                                                                                                                                                                                               NEALLY SECTION NO. US20060089326A1

Sequence 12, Application US/11296572

PUblication No. US20060089326A1

GENERAL INFORMATION:
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Klinen, Denin, Bening N.
APPLICANT: Klinen, Denin, Bening N.
APPLICANT: Klinen, Del N.
APPLICANT: Winnen, Dening N.
APPLICANT: Winnen, Dening N.
APPLICANT: US/09/818,918

PRIOR REPRING DATE: 2001-03-7

PRIOR PELING DATE: 1994-07-15

PRIOR PELING DATE: 1994-07-15

PRIOR PELING DATE: 1955-02-07

PRIOR PILING DATE: 1955-02-07

PRIOR PILING DATE: 1955-02-07

PRIOR PILING DATE: 1956-10-30

PRIOR PILING DATE: 196-10-30

PRIOR PILING DATE: 196-10-30

PRIOR PILING DATE: 196-10-30

PRIOR PILING DATE: 196-10-30

NUMBER: OS OF OR OF THE TABLES OF
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 20; DB 14; Length 20; 100.0%; Pred. No. 0.66; ive 0; Mismatches 0; Indels
Indels
     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PEATURE: OTHER INFORMATION: Synthetic oligonucleotide
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 56
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 dedercaacerreaededede 20
                                                                                                  1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                               1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 20; Conservative
```

ઠે 쉽

```
Gaps
                                                                                                                                                                                                                                                                                                                   GREMEALL INCOMENTION:

APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Klinman, Dennis
APPLICANT: Klinman, Dennis
APPLICANT: Klinman, Dennis
APPLICANT: Klinman, Dennis
APPLICANT: Steinberg, Alfred D.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: 10.397/048 (AMS)
CURRENT APPLICATION NUMBER: US/09/818,918
FRIOR APPLICATION NUMBER: US/09/818,918
FRIOR APPLICATION NUMBER: US 08/276,358
FRIOR APPLICATION NUMBER: US 08/276,358
FRIOR FILING DATE: 1994-07-15
FRIOR FILING DATE: 1995-02-07
FRIOR FILING DATE: 1995-02-07
FRIOR FILING DATE: 1995-02-07
FRIOR FILING DATE: 196-10-30
NUMBER OF SEQ ID NOS: 56
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WS-11-031-460-12

Sequence 12, Application US/11031460

Publication No. US20050277609A1

GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Klime, Joel N.
APPLICANT: Steinberg, Alfred D.
APPLICANTON INWHER: US/11/031,460

CURRENT APPLICATION NUMBER: US/09/918,918

PRIOR PILING DATE: 2001-03-27

PRIOR PILING DATE: 1995-02-07

PRIOR APPLICATION NUMBER: US 08/236,063

PRIOR APPLICATION NUMBER: US 08/738,652

PRIOR APPLICATION NUMBER: US 08/738,652

PRIOR PILING DATE: 1995-02-07

NUMBER OF SEQ ID NOS: 56

SEQ ID NO 12

LIBUGH!: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
100.0%; Score 20; DB 17;
Best Local Similarity 100.0%; Pred. No. 0.66;
Matches 20; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Synthetic oligonucleotide US-11-134-918-12
                                                                                                                                                                                                               US-11-134-918-12
; Sequence 12, Application US/11134918
; Publication No. US20050267064A1
; GENERAL INFORMATION:
                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 cecerchacerreaceces 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YPE: DNA
                                        දු පු
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                       US-11-127-654-740

Sequence 740, Application US/11127654

GENERAL INFORMATION: INMUNOSTIMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC

TITLE OF INVENTION: INFLAMMATORY DISEASES

FILE REFERENCE: C1039, 70060US01

CURRENT APPLICATION NUMBER: US/11/127,654

CURRENT PILING DATE: 2005-05-12

FRIOR APPLICATION NUMBER: US 60/279,642

FRIOR APPLICATION NUMBER: US 60/279,642

FRIOR PILING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFTWARE: PatentIn version 3.2

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC TITLE OF INVENTION: IMMUNOSTIMULATORY DISEASES
FILE REPERENCE: C1039.70060US01
CURRENT PEPLICATION NUMBER: US/11/12,653
PRIOR APPLICATION NUMBER: US 10/112,653
PRIOR PILING DATE: 2002-03-29
PRIOR FILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SOFTWARE: PATENTING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SOFTWARE: PATENTING DATE: 2001-03-29
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
Query Match 100.0%; Score 20; DB 17; Length 20; Best Local Similarity 100.0%; Pred. No. 0.66; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 / Match 100.0%; Score 20; DB 17; Length 20; Local Similarity 100.0%; Pred. No. 0.66; nes 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 100.0%; Score 20; DB 17; Length 20; Similarity 100.0%; Pred. No. 0.66; 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Synthetic oligonucleotide
US-11-127-654-923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-11-127-654-923
; Sequence 923, Application US/11127654
; Publication No. US20050250726A1
; GENERAL INFORMATION:
                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                  1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 20
```

셤 ò

```
TYPE: DNA
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Artificial Sequence
TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
US-11-127-654-495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-11-127-797-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 957, Application US/11127654
Publication No. US20050250726A1
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Rerg, Daniel J.
TITLE OF INVENTION: IMMINOSTIMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC TITLE OF INVENTION: INFLAMMATORY DISEASES
FILE REFERENCE: C1039,7006040301
CURRENT APPLICATION NUMBER: US/11/127,654
CURRENT FILING DATE: 2005-05-12
PRIOR APPLICATION NUMBER: US 10/112,653
PRIOR PILING DATE: 2001-03-29
RRIOR PILING DATE: 2001-03-29
RRIOR PILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SOFTWARE: Patentin version 3.2
                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: KINE, JOHN WITHING APPLICANT: KINE, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REFERENCE: C1039/7048 (AMS)
CURRENT APPLICATION NUMBER: US/11/067,587
CURRENT FILING DATE: 2005-02-25
FRIOR PAPLICATION NUMBER: US/09/818,918
FRIOR APPLICATION NUMBER: US 08/276,358
FRIOR APPLICATION NUMBER: US 08/276,358
FRIOR APPLICATION NUMBER: US 08/276,358
FRIOR APPLICATION NUMBER: US 08/286,063
FRIOR PILING DATE: 1995-02-07
FRIOR FILING DATE: 1995-02-07
FRIOR FILING DATE: 1995-10-30
NUMBER OF SEQ ID NOS: 56
SOFTWARE: FABELSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 20
                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                Query Match 100.0%; Score 20; DB 17; Length 20; Best Local Similarity 100.0%; Pred. No. 0.66; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.0%; Pred. No. 0.66;
Matches 20; Conservative 0; Mismatches 0; Indels
    // FEATURE:
// OTHER INFORMATION: Synthetic oligonucleotide
US-11-031-460-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ) OTHER INFORMATION: Synthetic oligonucleotide US-11-067-587-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
US-11-067-587-12
; Sequence 12, Application US/11067587
; Publication No. US20060003955A1
; GENERAL INFORMATION APPLIED APPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 dederchacerrandededed 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 gegerchacerreaegege 20
                                                                                                                                                                                                                                                                                                                                                                          1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-127-654-957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Pat
SEQ ID NO 957
LENGTH: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                გ
```

```
Sequence 495, Application US/11127654

Sequence 495, Application US/11127654

Sequence 495, Application US/11127654

Publication No. US20050250726A1

GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: IMMUNOSTRULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC TITLE OF INVENTION: INFLAMMATORY DISEASES
TITLE OF INVENTION: UNMBER: US/11/127,654
CURRENT FILING DATE: 2005-05-12
PRIOR APPLICATION NUMBER: US 60/279,642
PRIOR FILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SOFTWARE: Patentin version 3.2
SEQ ID NO 495
LENGTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 20; DB 17; Length 24; Best Local Similarity 100.0%; Pred. No. 0.66; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                     Length 21;
                                                                                                                                                                                                                                        Query Match 100.0%; Score 20; DB 17; Length 2 Best Local Similarity 100.0%; Pred. No. 0.66; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/11127797

Publication No. US20050245477A1

GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

APPLICANT: Krieg, Arthur M.

APPLICANT: Steinberg, Alfred D.

ITLE OF INVENTION: IMMUNOWDULATORY OLIGONUCLEOTIDES

FILE REPERREC: C1039/7029

CURRENT APPLICATION NUMBER: US/11/127,797

CURRENT FILING DATE: 2003-0-21

PRIOR APPLICATION NUMBER: US/0690,495

PRIOR PLING DATE: 2003-10-21

PRIOR APPLICATION NUMBER: US/08/36,063

PRIOR PLING DATE: 1995-02-07

NUMBER OF SEQ ID NOS: 27

SOFTWARE: PARSESQ for Windows Version 3.0

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-495
FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
US-11-127-654-957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           s ececicaacerreaececes 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 ececrcia de contra de co
```

FEATURE:

Gaps

```
Query Match 92.0%; Score 18.4; DB 15; Length 20; Best Local Similarity 95.0%; Pred. No. 4.9; Astches 19; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                 Search completed: May 4, 2006, 10:07:24 Job time: 456.437 secs
                                                                                                                                                                                  1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                          1 eeeerchacerrcaeeeee 20
                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                        ö
                                                                                                                                   Query Match
92.0%; Score 18.4; DB 15; Length 20;
Best Local Similarity 95.0%; Pred. No. 4.9;
Matches 19; Conservative 0; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1. Sequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application US/11127803
| Publication No. US2005024437941
| GENERAL INFORMATION |
| APPLICANT: Klinman, Dennis |
| APPLICANT: Klinman, Dennis |
| APPLICANT: Steinberg, Alfred D. |
| TILL OF INVENTION: IMMUNOMODULATORY OLIGONUCLEOTIDES |
| FILE REFERENCE: CL039/7029 |
| CURRENT APPLICATION NUMBER: US/11/127,803 |
| CURRENT APPLICATION NUMBER: US/10/690,495 |
| PRIOR PLILING DATE: 2005-05-11 |
| PRIOR PLILING DATE: 1995-02-07 |
| PRIOR FILING DATE: 1995-02-07 |
| SEQ ID NO: 27 |
| SEQ ID NO: 27 |
| LENGTH: 20 |
| LENGTH: 20 |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 92.0%; Score 18.4; DB 15; Best Local Similarity 95.0%; Pred. No. 4.9; Matches 19; Conservative 0; Mismatches 1;
; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-797-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , OTHER INFORMATION: Synthetic oligonucleotide US-11-128-127-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                     1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                             1 desercaacerrcaeeeee 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-11-128-127-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 14
US-11-127-803-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-11-127-803-1
                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
```

This Page Blank (uspto)

```
Continuation (48 o
AL606447 Oryza sat
AL121894 Human DNA
AC027416 Homo sapi
CR388174 Mus muscu
AC129234 Rattus no
AC118799 Rattus no
AC118799 Rattus no
AC135425 Oryza sat
AC073805 Mus muscu
AC073805 Mus muscu
AC073805 Mus muscu
                      AC151908 Mus muscu
AC079422 Mus muscu
Continuation (13 o
AL831746 Mouse DNA
AC096242 Rattus no
BV264373 S235P6213
BV262254 S235P6213
BV262254 S235P618
BV35505 Gallus ga
CR751606 Mouse DNA
AC102820 Mus muscu
AC068748 Homo sapi
AC1638307 Human DNA
CR825752 Mouse DNA
CONTINUATION (236
                                                                                                                                                                                                                                                                                                                                                                                                         PAT 07-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 24-JAN-2001
 AC122236 Mus muscu
AC106684 Rattus no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Friede, M. and Hermand, P.
Adjuvant compositions
Patent: WO 952549-A 4 21-OCT-1999;
SMITHKLINE BEECHAM BLOLOG (BE); FRIEDE MARTIN (BE); HERMAND
PHILIPPE (BE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 50; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .20
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         other sequences; artificial sequences
                                                                              BX264373
BX264254
BX35505
CR751606
AC102820
AC102820
AL583807
CR55552
AP008210_235
S AP008211_047
S OSJN00011
                                                                                                                                                                                                                                                                                                                                                                                                      20 bp
Sequence 4 from Patent WO9952549.
AX015200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX063579 20 bp
Squence 5 from Patent WO0100231.
AX063579 GI:12541303
                                                AY596297_12
AL831746
                                                                                                                                                                                                                           ACO27416
CR388174
AC129234
AC118799
AC135425
AC125192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                            AX015200.1 GI:10041243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGAGCTTCCTGAGCTT
                                                                                                                                                                            15
15
15
15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20; Conservative
92.0 214447
92.0 221360
92.0 225417
90.0 239570
90.0 239570
90.0 239570
97.0 2568
87.0 2688
87.0 668937
87.0 10000
87.0 10000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
87.0 110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 20; Conserv
  18.4
18.4
18.4
                                                                                 RESULT 2
AX063579
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
AX015200
                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                         0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC129500 Home sapi
A1355098 Human chr
AC022795 Home sapi ·
AC148328 Mus muscu
A1445885 Human chr
AC022801 Home sapi
AX191612 Pan trogl
AC006499 Home sapi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX063579 Sequence
AX088933 Sequence
AX104695 Sequence
AX342287 Sequence
AX355545 Sequence
AX355748 Sequence
AC13704 Homo sapi
AC139332 Mus muscu
                                                                                4, 2006, 02:22:43 ; Search time 464.368 Seconds (without alignments) 2448.208 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX015200 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
              5.1.7
Biocceleration Ltd
                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                5883141 segs, 28421725653 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
              GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                           nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX063579
AX1086933
AX1086933
AX342287
AX355545
AX355545
AX355345
AC139302
AC139332
AC139332
AC13930
CNSOSTCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AC022801
AY191612
AC006499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC022795
AC148328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CNS07EES
                                                                                                                                                      1 tecatgagettectgagett 20
                                                                                                                                                                                         Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                            US-10-789-758A-5
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9b ba: *
9b on: *
9b on: *
9b on: *
9b pr: *
9b pr: *
9b pr: *
9b w: *
9b w: *
9b w: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                              IDENTITY NUC
                         Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
Match 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12:
```

ged sed

Minimum DB Maximum DB

Database

Perfect score:

Seguence:

OM nucleic

Run on:

Scoring table:

Searched:

ö

0000

Score

Result Š.

```
PAT 06-PEB-2002
                                                                                                                                                                                                                                                                  PAT 12-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                    Davis, H.L. and Mccluskie, M.J.
Immunostimulatory nucleic acids for inducing a th2 immune response
Patent: WO 0195935-A 2 20-DEC-2001;
Outawa Health Research Institute (CA); Coley Pharmaceutical Group,
Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Methods for enhancing antibody-induced cell lysis and treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                   Gaps
                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 50; tive 0; Mismatches 0; Indels
                                                                                  6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="synthetic construct"
/mol_type="unassigned DNA"
/mol_type="taxon:32630"
/note="Synthetic oligomuleotide
phosphorothioate backbone"

    .20
    Organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"

/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancer
Patent: WO 0197843-A 573 27-DEC-2001;
UNIVERSITY OF IOWA RESEARCH FOUNDATION
Location/Qualifiers
                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               other sequences; artificial sequences
                                                                                  Score 20; DB
Pred. No. 50;
                                                                                Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 50;
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX355545 20 bp C
Sequence 573 from Patent WO0197843.
AX355545.
AX355545.1 GI:18620213
                                                                                                                                                                                                                                                                20 bp
Sequence 2 from Patent WO0195935.
AX342287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                         1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                  1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Weiner, G. and Hartmann, G.
                                                                                                                                                                                                                                                                                                                    AX342287.1 GI:18151774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                      synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
AX355545
                                                                                                                                                                                                                                  RESULT 5
AX342287
                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                  ORIGIN
                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                       ô
                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 17-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 30-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Krieg,A.M., Schetter,C. and Vollmer,J.C.
munuostimulatory nucleic acids
Patent: WO 0122972-A 887 05-ABR-2001;
UNIVERSITY OF IOWA RESEARCH FOUNDATION (US); Coley Pharmaceutical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                       .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'Match 100.0%; Score 20; DB 6; Length 20; Local Similarity 100.0%; Pred. No. 50; onservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                  Query Match
100.0%; Score 20; DB 6; Length 20;
Best Local Similarity 100.0%; Pred. No. 50;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1..20
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="texon:32630"
/noTe="CpG containing oligonucletotide"
                                                                                                                                    /organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon.32630"
/noTe="oligonucleotide"
                                                                  Patent: WO 0100231-A 5 04-JAN-2001;
SMITHKLINE BEECHAM BIOLOGICALS S.A. (BE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NA
DIA
                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
other sequences; artificial sequences.
   other sequences, artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Vaccine
Patent: WO 0100232-A 5 04-JAN-2001;
SmithKline Beecham Biologics SA (BE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX104695 20 bp
Sequence 887 from Patent W00122972.
AX104695.1 GI:13920892
                                                                                                                                                                                                                                                                                                                                                                                                                          AX088933 20 bp
Sequence 5 from Patent WO0100232.
AX088933
                                  Cohen, J., Garcon, N. and Voss, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
1. .20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                      1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                        1 rccarcactrccrcactr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX088933.1 GI:13397691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Garcon, N. and Voss, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GmbH (DE)
                                                      Vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX104695
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
AX088933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                          ð
```

Bource

셤 ઠે

```
21306:
22218:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2909:
3009:
3907:
4007:
5027:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18225:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6963:
7063:
8002:
8102:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9113:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19267:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5940:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12135:
13059:
13159:
14073:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15177:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16090:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17189:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8125:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9013:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14173:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16190:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20189:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11034:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11134:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7089:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21206:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .9167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12035
                                                                                                                                                                                                                                                                                                                                                                                                                                                        be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16091
16191
17090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14174
15078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20290
21207
21307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15178
                                                           TITLE
                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birren, B., Nusbaum, C., Lander, E., Abouelleil, A., Allen, N.,
Anderson, S., Arachchi, H.M., Barna, N., Baetien, V., Bloom, T.,
Boguelavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Choepel, Y.,
Collymore, A., Cook, P., Cooke, P., Corum, B., DeArellano, K.,
Diaz, J.S., Dodge, S., Dooley, K., Dorris, L., Erickson, J., Faro, S.,
Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S.,
Graham, L., Grand Pierre, N., Hafez, N., Hagopian, D., Hagos, B.,
Hall, J., Horton, L., Hulme, W., Iliev, I., Johnson, R.,
Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R.,
Lindblad-Toh, K., Liu, G., Lui, A., Mabbitt, R., MacLean, C.,
Macdonald, P., Major, J., Manning, J., Matthews, C., McCarthy, M.,
Meldrim, J., Meneus, L., Mihova, T., Mlenga, V., Murphy, T., Naylor, J.,
Nguyen, C., Nicol, R., Norbu, C., O'Connor, T., O'Donnell, P.,
O'Nell, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N.,
Rachupka, A., Ramasamy, U., Raymond, C., Retta, R., Rise, C., Rogov, P.,
Roman, J., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
   ö
                                                                                                                                        PAT 01-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HTG 10-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACLISY704
83194 bp DNA linear HTG 10-FEI Homo sapiens chromosome 18 clone RP13-514J16 map 18, LOW-PASS SEQUENCE SAMPLING.
   Gaps
 ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 50; ive 0; Mismatches 0; Indels
                                                                                                                                        linear
   Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 83194)
Birren, B., Nusbaum, C. and Lander, E.
Homo sapiens chromosome 18, clone RP13-514J16
Unpublished
                                                                                                                                                                                                                                                                      Inhibition of angiogenesis by nucleic acids
Inhibition of angiogenesis by nucleic acids
Patent: WO 02053141-A 887 11-JUL-2002;
Coley Pharmaceutical Group, Inc. (US)
Location/Qualifiers
   ö
                                                                                                                                                                                                                                                                                                                                                          1. .20
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="teaxon.32630"
/note="Synthetic Sequence"
                                                                                                                                        DNA
                                                                                                                                                                                                                                                 other sequences; artificial sequences
                                                                                                                                 20 bp Di
Sequence 887 from Patent WO02053141.
AX547748
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGAGCTTCCTGAGCTT 20
                              1 TCCATGAGCTTCCTGAGCTT 20
                                              TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC139704.1 GI:28275005
HTG; HTGS PHASE0.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                   AX547748.1 GI:25812892
                                                                                                                                                                                                                 synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.
Best Local Similarity 100.
Matches 20; Conservative
20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC139704
                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 8
AC139704/c
                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                         RESULT 7
AX547748
                                                                                                                                                                                                                                                                                                                                            PEATURES
```

ઠે 요

```
Spencer, B., Stange-Thomann, N., Stojanovic, N., Stubbs, M.,
Talamas, J., Teefaye, S., Theodore, J., Topham, K., Travers, M.,
Sassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X.,
Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
Direct Submission
                                                                                                                       Submitted Minger 10. The street, Cambridge, MA 02141, USA Research, 320 Charles Street, Cambridge, MA 02141, USA All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                          Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * NOTE: This record contains 82 individual

* sequencing reads that have not been assembled into
contigs. Runs of N are used to separate the reads
and the order in which they appear is completely
arbitrary. Low pass sequence sampling is useful for
identifying clones that may be gene-rich and allows
voverlap relationships among clones to be deduced.
However, it should not be assumed that this clone
will be sequenced to completion. In the event that
the record is updated, the accession number will
                                                                                                                                                                                                                                                                                                            Center code: WIBR
Web site: http://www-seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
------- Project Information
Center project name: L29418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig of 912 bp in length gap of 100 bp contig of 902 bp in length gap of 100 bp contig of 892 bp in length gap of 100 bp gap of 100 bp contig of 892 bp in length gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100 bp
of 905 bp in length
100 bp
of 892 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 904 bp in length
100 bp
of 913 bp in length
100 bp
of 899 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
of 936 bp in length
100 bp
of 942 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100 bp
of 922 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100 bp
of 912 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
of 917 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                         Center clone name: 514_J_16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig
gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of
contig
```

```
gap of 100 bp contig of 929 bp in length gap of 100 bp contig of 940 bp in length contig of 931 bp in length contig of 931 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        f 100 bp
g of 920 bp in length
f 100 bp
g of 926 bp in length
                                                                                                                                                                                                                                              100 bp
9 of 922 bp in length
f 100 bp
g of 904 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                      100 bp in length 100 bp in length 100 bp in length 100 bp in length 100 bp in length 100 bp in length 100 bp in length 100 bp in length
100 bp
1 of 912 bp in length
1 100 bp
1 of 889 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 f 100 bp
g of 923 bp in length
f 100 bp
g of 895 bp in length
g of 935 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .00 bp
of 931 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gap of 100 bp
contig of 932 bp in length
gap of 100 bp
contig of 922 bp in length
                                                                                                                                                                                                                                                                                                          100 bp
of 923 bp in length
                                                                                                                                                                                                                                                                                                                                                                        100 bp
of 922 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           00 bp
of 905 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
of 897 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
of 930 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 bp
of 909 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
of 918 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 bp of 912 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
of 925 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 931 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bp in length
                                                                                                                                                       100 bp
of 944 bp in length
                                                                                                                                                                                      100 bp
of 918 bp in length
                                                                                                                                                                                                                      100 bp
of 919 bp in length
                                                                                                                                                                                                                                                                                                                                                           in length
                                                                                                            926 bp in length
                                                      ر الم
1 كوم 14
10 كوم 17
10 كوم 17
                                                                                                                       100 bp
of 908 bp i
                                                                                                                                                                                                                                                                                                                                           100 bp
of 896 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contig
gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
gap of
contig
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig
gap of
contig
gap of
contig
   gap of contig of gap of contig of gap of contig of conti
                                                                                                                                                                                                    contig
contig
contig
contig
gap of
gap of
                                                                                                                                                                                                                                                                                                                            contig
gap of
contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                           gap of
contig
gap of
contig
contig
gap of
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig
gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig
gap of
                                                                                                                                                                         contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58944:
59044:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1888:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33826:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56889:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57920:
                                                                                                                                                                                                                                                                                                                               13397:
                                                                                                                                                                                                                                                                                                                                                               14393:
                                                                                                                                                                                                                                                                                                                                                                                                                             6433:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10563:
                                                24219:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    34394
35416
35516
36534
37473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7573
```

Birren, B., Linton, L., Nusbaum, C., Lander, B., Abraham, H., Allen, N., Anderson, S., Baldwin, J., Barna, N., Bastien, V., Beda, F., Boukhagalter, B., Brown, A., Burkett, G., Boukhagalter, B., Brown, A., Burkett, G., Campopiano, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Colgangelo, M., Collins, S., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Colgangelo, M., Gard, G., Doyle, M., Ferreira, P., Fitzhugh, W., Gage, D., Galagan, J., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Gardyna, S., Ginde, S., Goyette, M., Graham, L., Karatas, A., Klein, J., LaRocque, K., Lohneso, C., Kann, L., Karatas, A., Klein, J., LaRocque, K., Lohneso, C., Kann, L., Karatas, A., Klein, J., Lakocque, K., Lohneso, C., Kann, L., Marquis, N., Howland, J., Lakocque, K., Loke, M., McKernan, K., McPheeters, R., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., Mardin, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Pisani, C., Pollara, V., Raymon, C. H., O'Connor, T., O'Donnell, P., O'Neil, D., Olivar, T.M., Oliver, J., Peterson, K., Pierre, N., Fisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rochman, D., Stanger, S., Theodore, J., Tirrell, A., Travers, W., Wirman, D., Ye, W.J., Vonng, G., Zaihoun, J., Zimmer, A. and Zody, M.
Direct Submission Mhitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA ACUSEL/8 135640 bp DNA linear PRI 02-NOV-2002 Homo sapiens chromosome 18, clone RP11-666N19, complete sequence. AC036178 ö Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Euarchontoglires, Primates, Catarrhini, Gaps Score 18.4; DB 14; Length 83194; Pred. No. 3e+02; 0; Mismatches 1; Indels 0; 9 100 bp 9 of 914 bp in length f 100 bp 9 of 904 bp in length f 100 bp f 100 bp 9 of 904 bp in length f 100 bp 9 of 925 bp in length f 100 bp f 100 bp f 100 bp in length of 931 bp in length 100 bp of 929 bp in length 100 bp of 898 bp in length bp in length 1 (bases 1 to 135640)
Birren, B., Nusbaum, C. and Lander, B.
Homo sapiens chromosome 18, clone RP11-666N19
Unpublished 96. 20. 20. 20. 100 13394 TCCATGAGCTTCCTGATCTT 13375 contig gap of contig gap of contig gap of contig gap of contig contig contig contig contig gap of contig gap of contig gap of 1 TCCATGAGCTTCCTGAGCTT 20 AC036178.11 GI:24476102 (bases 1 to 135640) 92.0%; 62088: 63017: 63117: 64015: 92.04; 70169: 65129: 56033: 56133: 67137: 68062: Homo sapiens (human) 61057: 61988: 64115: 65029: 67037: 59160: Best Local Similarity 95.0 Matches 19; Conservative Homo sapiens 599045 60951 60951 61989 61989 63018 63118 64116 64116 65130 66134 67038 Query Match LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM RESULT 9 AC036178/c REFERENCE AUTHORS TITLE JOURNAL REFERENCE AUTHORS TITLE JOURNAL ò 셤

```
/rpt_family="Aludb"
15192. 1.5489
/rpt_family="Aludg"
15592. 1.5618
/rpt_family="TryA]
/rpt_family="TryA]
/rpt_family="TryA]
/rpt_family="TryA]
                                                                                                                                                                                                                                                                                                                             /rpt_family="Alux"
|/spt_family="Alux"
|1618. .16699
|/rpt_family="Alux/FlAM"
|16891. .17190
|/rpt_family="AluSq"
|7191. .17339
|/rpt_family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17829. .17642
/rpt_family="LTR67"
complement(18321. .18742)
/rpt_family="LTR40b"
20981. .21125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement (26897. .27009)
/rpt_family="FLAM_C"
7010. .27146
/rpt_family="LIMB2"
27391. .27420
/rpt_family="AIT_rich"
/rpt_family="AIT_rich"
/rpt_family="AIT_rich"
/rpt_family="AIT_rich"
/rpt_family="MSR2"
27925. .28263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt_family="Alusg" (6847). .26846)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt family="(TA)n"
complement(28282, .28574)
/rpt family="AluSq"
28818, .28854
                                  .ement (11797. .12102)
family="AluSx"
                                                                                             rpt_family="THE1B-int"
2159. .12500
             rpt_family="THE1B-int"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="LiPA7"
23356 . 23642
/rpt_family="Alusx"
23657 . 23685
/rpt_family="AT_rich"
24356 . 25121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="AluSx"
21447. .21486
/rpt_family="(TGAA)n"
21559. .21858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpt_family="GA-rich"
5299. .25543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="LiMD2"
25113. .25170
/rpt_family="LiM4"
25231. .25282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'rpt_family="AT_rich"
                                                                                                                                     /rpt_family="THB1B"
13135. .13440
/rpt_family="AluJb"
complement(14546. .1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt family="L1ME2"
omplement(26887. .;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt family="L1MB2"
7363. .17480
rpt family="L1MB2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7766. .17828
rpt_family="MLT1J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpt family="Alusx"
1866. .22196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'rpt_family="LIME2"
complement(26538. .:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpt family="MER2"
5771. .26537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_family="MIR"
1165. .21446
                                                                          .12158
                                                                    2103.
                                    repeat_region
                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                             repeat_region
                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                 repeat_region
                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
Barren, B., Wabsum, C., Lander, B., Ali, A., Allen, N., Anderson, S., Barren, B., Wabsum, C., Lander, B., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Coack, A., Cooke, P., Dakrellano, K., Dewar, K., Diaz, J. S., Dodge, S., Gradyan, S., EttzGerald, M., Gage, D., Galagan, J., Garco, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Katas, A., Kalls, C., Landers, T., Levine, K., Lindalad-Toh, K., Linda, MacLean, C., Macdonald, P., Major, J., Matthews, C., Kamat, A., Katas, A., Kalls, C., Landers, T., Levine, K., Lindalad-Toh, K., Liu, G., MacLean, C., Nacdonald, P., Major, J., Matthews, C., Norman, C. H., O'Connor, T., O'Lonnell, P., Walor, J., Match, T., Manga, V., Matthews, C., Morderthy, M., Waldrim, J., Mangue, T., Marga, T., Manga, V., Matthews, C., Morderthy, M., Waldrim, J., Mangue, T., Marga, T., Manga, V., Marga, P., Pierre, M., Raymond, C., Retta, R., Rise, C., Rogov, P., Pornor, T., O'Connor, T., O'Lonnell, P., O'Neil, D., Oilver, J., Peterson, R., Schauer, S., Matthews, C., McCarthy, M., Maldrim, J., Menceu, L., Mikor, J., Matthews, C., McCarthy, M., McLean, C., MacCon, B., Cocke, P., Cocke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             http://ftp.genome.washington.edu/RM/RepeatMasker.html
------ Genome Center
Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center code: WIBR
Web site: http://www-seq.wi.mit.edu
Contact: sequence submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="RP11-666N19"
/clone_lib="RPC1-11 Human Male BAC"
complement(4. .9444)
/rpt_family="ALK/alpha"
9701_ .9961
/rpt_family="AlwJb"
9962_ .10303
/rpt_family="THE18"
10304. .11796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Center project name: L9219
Center clone name: 666_N_19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /map="18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
```

```
This sequence was finished as follows unless otherwise noted:
all regions were double stranded, sequenced with an alternate
chemistry, or covered by high quality data (i.e. phred quality
>=30); an attempt was made to resolve all sequencing problems, such
as compressions and repeats; all regions were covered by at least
one plasmid subclone, fosmid clone or direct clone walk sequence.
Sequence from the Mouse Genome Sequencing Consortium whole genome
shotgun may have been used to obtain the consensus sequence. The
assembly was confirmed by restriction digest.
This finishing standard has slightly changed from the previous
Human standard. Specifically, standards for regions of low sequence
complexity (such as dinuclectide repeats and small unit tandem
repeats) have been relaxed. These regions are very prevalent in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      If a sequence meets the criteria of the above statement, it needs no comments or tags. If the criteria are not met, such as ambiguous bases, then the region is duly annotated.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The BAC Library has been constructed by Pieter de Jong and coworkers (http://www.chori.org) from male C57BL/6J mouse spleen and/or brain genomic DNA. The clone and detailed information can be obtained from Pieter de Jong and coworkers at http://www.chori.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mapping information for this clone was provided by Dr. Wes Warren, Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see http://genome.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /notes="Sequence derived from PCR product of project DNA" 59170. 59656
/hotes="Sequence derived from one plasmid subclone." 60175. 60252
/notes="Sequence derived from one plasmid subclone."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Sequence derived from PCR product of project DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="Sequence derived from PCR product of project DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     105406. .105407
/note="Bacterial transposon insertion in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             derived from one plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note="Sequence derived from one plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        derived from one plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This sequence is the entire insert of the clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 18.4; DB 9;
Pred. No. 3e+02;
0; Mismatches 1;
Contact: submissions@watson.wustl.edu
------ Summary Statistics
Center project name: M_BB0113C21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
11. 143802
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="RPCI-24"
54616._.54873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'clone="RP24-113C21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Sequence
124429. .124507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note="Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  138320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141288. .141758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124249. .124255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               143375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 92.0%;
Best Local Similarity 95.0%;
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MAPPING INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    here"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          minimal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unsure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ungure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unsure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ungure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unsure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROD 21-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
Submitted (21-JUN-2005) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The sequence of Mus musculus BAC clone RP24-113C21
Unpublished (2001)
2 (bases 1 to 143802)
McPharson, J.D. and Waterston, R.H.
Direct Submission
Submitted (30-JAN-2003) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (16-JUN-2005) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
6 (bases 1 to 143802)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (27-MAR-2005) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
4 (bases 1 to 143802)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genome Sequencing Center, 4444 Forest Park
31108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Buarchontoglires, Glires, Rodentia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AC139332 143802 bp DNA linear ROD 21-JUN-
Mus musculus BAC clone RP24-113C21 from chromosome 5, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ------ Genome Center Center Center: Washington University Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MO 63108, USA
On Jun 8, 2005 this sequence version replaced gi:61889203.
                                                                                                                                                                                                                                                                                                                                                                               Score 18.4; DB 8; Length 135640;
Pred. No. 3e+02;
0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center code: WUGSC
Web site: http://genome.wustl.edu
                                                                                                                                                                                                                                 37005. 37025
/rpt family="AT rich"
complement (37371. 37668)
/rpt family="AluSx"
38530. 38654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sciurognathi, Muridae, Murinae, Mus.
1 (bases 1 to 143802)
Trani,L., Bielicki,L. and Haglund,K.
                          /rpt_family="AT_rich"
complement(30529..30692)
/rpt_family="MIR"
complement(30885..30956)
/rpt_family="FLAM_A"
34172..34441
                                                                                                                                                                                                           /rpt_family=" (CATA) n" 37005. .37025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (08-JUN-2005) Genome
Parkway, St. Louis, MO 63108,
5 (bases 1 to 143802)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106308 rccardadcrrccrdarcrr 106289
                                                                                                                                                                    /rpt_family="AluJb" 34447. .34545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AC139332
AC139332.5 GI:67010220
            .30127
                                                                                                                                                                                                                                                                                                                                                                                    ch 92.0%;
al Similarity 95.0%;
19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rect Submission
                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wilson, R.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wilson, R.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence.
            repeat_region
                                                          repeat_region
                                                                                                    repeat_region
                                                                                                                                                        repeat_region
                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
AC139332/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
```

ó

Gaps

ö

1; Indels

Length 143802;

clone excised

subclone."

VERSION KEYWORDS

```
CNSOSTCH 153094 bp DNA linear PRI 08-JUN-2001
Human chromosome 14 DNA sequence BAC R-241E13 of library RPCI-11
from chromosome 14 of Homo sapiens (Human), complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae; Homo.

1 (bases 1 to 153094)

Heilig, R., Petit, J.L., Vico, V., Dasilva, C., Robert, C., Wincker, P., Brottier, P., Cattolico, L., Barbe, V., Pelletier, E., Artiguenave, F., Evcy, M., Brulls, T., deBerardinis, V., Cruaud, C., Gyapay, G., Saurin, W. and Weissenbach, J. Sequencing of the human chromosome 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                             NOTE: This is a 'working draft' sequence. It currently consists of 6 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 18.4; DB 14; Length 143988; Pred. No. 3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                       62104: contig of 62104 bp in length 62204: gap of 100 bp 123421: contig of 61217 bp in length 123521: gap of 100 bp 129702: gap of 100 bp 129702: gap of 100 bp 133772: gap of 100 bp 133772: gap of 100 bp in length 133762: contig of 4994 bp in length 138866: gap of 100 bp 143988: contig of 5122 bp in length
Contact: sequence submissions@genome.wi.mit.edu
------ Project Information
Center project name: L27856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="RP11-1073A19"
/clone_lib="RPCI-11 Human Male BAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ı,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .143988
/organism="Homo sapiens"
                                                                                   Center clone name: 1073_A_19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /estimated_length=100
138767. .138866
/estimated_length=100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /estimated_length=100
123422. .123521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ed_length=100.129702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /estimated length=100
133673. .133772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic_DN
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109658 TCCATGAGCTTCCTGATCTT 109639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chromosome="18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL355098.3 GI:13677194
HTG; HTGS ACTIVEFIN.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .62204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'estimated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62105.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Нощо варіепв
                                                                                                                                                                                                                                                                                                                                                                                          62105
62205
                                                                                                                                                                                                                                                                                                                                                                                                                                              123422
123522
129603
129703
133673
133773
138867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AL355098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
CNS05TCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unjunitanea

2 (bases I to 143988)

Birran, B., Nusbaum, C., Lander, E., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Gamarate, J., Chang, J., Chazaro, B., Chong, J., Chararo, B., Colymore, A., Cooke, P., DeArellano, K., Dewar, K., Olymore, A., Gardyna, S., Gord, S., Graham, L., Grand-Pierre, N., Hagos, B., Horton, L., Hulme, W., Iliev, I., Johnson, R., Jones, C., Kamat, A., Karatas, A., Kells, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Margha, T., Marga, V., Murphy, T., Naylor, J., Maneus, L., Milvova, T., Mienga, V., Murphy, T., Naylor, J., Naylor, C., Nicol, R., Norbu, C., Norman, C.H., Phunkhang, P., Pierre, N., Raymond, C., Retta, R., Rise, C., Rogov, P., Roman, J., Roy, A., Schauer, S., Schupback, R., Seaman, S., Severy, P., Smith, C., Spencer, B., Stange-Thomann, N., Stojanovic, N., Tasker, V., A., Vo, A., Wilson, B., Wu, X., Wyman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Summarson

Direct Summarson

Submitted (30-JUL-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

Barnan, J. 20 Charles Street, Cambridge, MA 02141, USA

Barnan, N. Bastien, V. Bloom, T., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Chazaro, B., Choepel, Y., Collymore, A., Cooke, P., DeArellano, K., Dewar, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FitzGerald, M., Gage, D., Galagan, J., Gardyna, S., Gord, S., Graham, L., Grander, F., Jones, C., Kamat, A., Karatas, A., Kalls, C., Handers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Mathews, C., McCathy, M., Meldrim, J., Meneus, L., Mihova, T., Manga, V., Murphy, T., Naylor, J., Monon, L., Mihova, T., Mererson, K., Phunkhang, P., Pierre, N., Raymond, C., Nicol, R., Norbu, Peterson, K., Phunkhang, P., Pierre, N., Raymond, C., Retta, R., Flanke, C., Rogov, P., Roman, J., Roylaw, Schauer, S., Schupback, R., Stange-Thomann, N., Stanger, M., Youssilev, H., Vo, A., Wilson, B., Wu, X., Waman, D., Young, G., Zainoun, J., Zembek, L., Zimmer, A. and Zody, M. Direct Submission
                                                                                                                                                              AC129500 143988 bp DNA linear HTG 27-MAR-2003
Homo sapiens chromosome 18 clone RP11-1073A19 map 18, 6 unordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (17-MAR-2003) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA On Jan 1, 2003 this sequence version replaced gi:27375067.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                                                                                                                    AC129500.3 GT:27452937
HTG; HTGS PHASE1; HTGS_FULLTOP; HTGS_CANCELLED.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Birren, B., Nubbaum, C. and Lander, E.
Homo sapiens chromosome 18, clone RP11-1073A19
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center code: WIBR
Web site: http://www-seq.wi.mit.edu
60636 TCCATAAGCTTCCTGAGCTT 60617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 143988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                     AC129500
                                                                                                                                                                                                                           pieces
                                                                                                          RESULT 11
AC129500/c
                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
```

TITLE

ö

COMMENT

```
Birren, B. Linfon, L., Nussaum, C., Lander, R., Adramam, H., Allen, N., Barnen, S., Baldwin, J., Barne, N., Beckerly, R., Beda, F., Boguslavkiy, L., Boukhgalter, B., Brown, A., Burkett, G., Castle, A., Cocke, P., Dekrellano, K., Domino, M., Doyle, M., Fensetcr, J., Cocke, P., Dekrellano, K., Domino, M., Doyle, M., Fensetcr, J., Cocke, P., Estreist, P., Fitzhugh, W., Forrest, C., Gage, D., Galagan, J., Gardyna, S., Grant, G., Hagos, B., Haeford, A., Horton, L., Howland, J.C., Johnson, Y., McRann, E., Karatas, A., Klein, J., Landers, T., Lehocxky, J., Levine, P., McKernan, K., Macdonald, P., Marquis, M., McBwan, P., McGurk, A., McKernan, K., McPheters, R., Meldrim, J., Meneus, L., Morray, C., Locke, K., Norman, C.H., O'Connor, T., O'Donnell, P., Olivar, T. McKernan, K., Pierrell, R., Severy, P., Spencer, B., Stange-Thomann, M., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Stojanovic, M., Subramanian, A., Talamas, J., Tesfaye, S., Wu, J., Stojanovic, M., Subramanian, A., Talamas, J., Tesfaye, S., Mu, J., Stojanovic, M., Subramanian, A., Talamas, J., Tesfaye, S., Dodge, S., Stojanovic, M., Subramanian, A., Talamas, J., Tesfaye, S., Dodge, S., Stojanovic, M., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Barren, B., Nusbaum, C., Lander, E., Ali, A., Allen, M., Anderson, S., Barra, B., Nusbaum, C., Lander, E., Ali, A., Allen, M., Anderson, S., Faro, S., Gord, M., Charle, M., Magor, J., Mathwes, C., McCarthy, M., Meldrim, J., Ghang, L., Mihos, M., Mison, B., Graham, L., Grand, Pierre, M., Maccar, C., Maccara, C., Macdora, J., Mathwes, C., Macdora, J., Manderson, S., Butte, J., Manderson, C., Macdora, C., McLane, M., Malor, J., Manderson, C., Macdora, J., Manderson, C., Manderson, C., Macdora, J., Manderson, S., Schube, S., Graham, J., Schauer, S., Schube, S., Sch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Summassion

Direct Summassion

Submitted (05-SEP-2002) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

Research, 320 Charles Street, Cambridge, MA 02141, USA

Birren, B., Nusbaum, C., Lander, B., Ali, A., Allen, N., Anderson, S., Barna, N., Bastien, V., Bloom, T., Boguslavkiy, L., Boukhgalter, B., Camarata, J., Chang, J., Charson, S., Charson, S., Charson, C., Dazaro, B., Choepel, Y., Collymore, A., Cook, A., Cook, P., DeArellano, K., Demey, K., Diaz, J.S., Dodge, S., Faro, S., Ferreira, P., FilzeGerald, M., Gage, D., Galgan, J., Rorton, L., Hulme, W., Illev, I., Johnson, R., Lindblad-Toh, K., Liu, G., MacLean, C., Landers, T., Levine, R., Lindblad-Toh, K., Liu, G., MacLean, C., Macdonald, P., Major, J., Matthews, C., Kamat, A., Muchan, J., Naylor, J., Nicol, R., Matthews, C., Rotta, R., Norbu, C., Norman, C., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Peterson, K., Phunkhang, P., Pierre, N., Raymond, C., Retta, R., Seaman, S., Schupback, R., Seaman, S., Schupback, R., Seaman, S., Schupback, S., Theodore, J., Tophan, K., Travers, M., Vassiliev, H., Zambek, L., Zimmer, A. and Zody, M., Zembek, L., Zimmer, A. and Zody, M., Direct, Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Abraham, H., Allen, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Center code: WIBR
Web site: http://www-seq.wi.mit.edu
Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           158003 bp DNA linear PRI 18-SEP-2002
AC022795.9 GI:23127938
HTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                 Submitted (07-JUN-2001) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (B-mail : segref@genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                          Score 18.4; DB 8; Length 153094;
Pred. No. 3e+02;
0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percentage of bases with a quality value >= 40 : 99 %.
Location/Qualifiers
1. .153094
| .153094 | .153094 | .153094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 | .150094 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hominidae, Homo.

1 (bases 1 to 158003)

Birren,B., Nusbaum,C. and Lander,E.

Homo sapiens chromosome 18, clone RP11-254G11
Upubblished
2 (bases 1 to 158003)
                                                                                                                                                                                                                                                                                                                                                                                                       Web site: http://www.genoscope.cns.fr/
Contact: SegRef@genoscope.cns.fr
                                                                                                                                                                                                                            Web : www.genoscope.cns.fr)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56903 TCCTTGAGCTTCCTGAGCTT 56922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Overall quality chart :
Range : bases
0 :
   Unpublished
2 (bases 1 to 153094)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 95.0%;
Matches 19; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34
: 1110
: 4764
: 4337
: 8503
: 30075
: 104271
                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                         Center code: GS
                                                                          Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC022795/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
   JOURNAL
REFERENCE
AUTHORS
                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
```

셤 à

```
/clone="RP11-254G11"
/clone lib="RPCI-11 Human Male BAC"
193. .221
/rpt_famlly="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10479. .10599
/rpt_family="MRR58C"
complement(10989. .11103)
/rpt_family="MIR3"
------ Project Information
                                                               1. .158003

/organism="Homo sapiens"

/mol_type="genomic DNA"

/db_xref="taxon:9606"

/chromosome="18"
                                                                                                                                                                                                                                                                                                                                                                                                                                          2960...4176

Typt family="LiMBS"

Complement (4177...4476)

/rpt family="AluSq"

4477...497

/rpt family="LiMBS"

4790...493

/rpt family="LiMBS"

Complement (4938...5248)

/rpt family="AluSx"

S549...5512

/rpt family="LiMBS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_finally="AT_rich"
5815. 6046
/rpt_family="LIMBS"
complement (6049. 6096)
/rpt_family="AluJb"
complement (6049. .6266)
/rpt_family="AluJb"
6267. .6601
/rpt_family="AluJb"
6267. .6601
/rpt_family="AluJb"
6267. .6601
/rpt_family="AluJb"
6903. .6900
/rpt_family="AluJb"
6903. .7788
/rpt_family="LIMBS"
6903. .7788
/rpt_family="LIMBS"
6912. .7788
/rpt_family="LIMBS"
692. .7788
/rpt_family="LIMBS"
693. .7788
/rpt_family="LIMBS"
693. .7788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8438. .9080
/rpt_family="LiMC5"
complement (9081. .9379)
/rpt_family="AluJb"
9380. .10056
           Center project name: L6039
Center clone name: 254_G_11
                                                                                                                                                                                                                                                                 82. ..409
rpt_family="AT_rich"
                                                                                                                                                                                                                                      48. .691 _ rpt_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="MER46A"
10479. .10599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'rpt family="LiMC5" 0057. .inox
                                                    Location/Qualifiers
                                                                                                                                       map="18"
                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                       FEATURES
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Mus.

CE 1 (bases 1 to 167164)

RS Hodges, J. and Cotton, M.

The sequence of Mus musculus BAC clone RP24-329C11

AL Unpublished (2001)

CE 2 (bases 1 to 167164)

RS Wilson, R.K.

Direct Submission

AL Submission

AL Submission

AL Submission

AL Barkway, St. Louis, MO 63108, USA

SW Wilson, R.K.

Birect Submission

SW Wilson, R.K.

Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AC148328 167164 bp DNA linear ROD 28-JAN-2005
Mus musculus BAC clone RP24-329C11 from 9, complete sequence.
AC148328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 158003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92.0%; Score 18.4; DB 8; Length 1
95.0%; Pred. No. 3e+02;
tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                              /rpc_family="LIMD2"
complement(16215, .17781)
/rpc_family="LIMD2"
complement(17782, .18095)
/rpc_family="LIMD2"
                         /rpt_family="Limb3"
12392. 12684
/rpt_family="Limb4"
complement (13645. 13943)
/rpt_family="LimC4a"
14006. 14177
                                                                                                                           / 14207. .14262
//pt family="AT rich"
complement(14741. .14912)
//pt family="Alusx"
//or. 15032. .1511"
                                                                                                                                                                                                        complement (17782. .18095)
/rpt family="AluJb"
complement (18096. .18290)
/rpt family="LIMD2"
complement (18291. .18590)
/rpt family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (18591, .20121)
/rpt_family="Limb2"
20122, .20429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="AluY"
complement(20430. .20804)
/rpt_family="LIMD2"
complement(21911. .22029)
                                                                                                        14006. .14177
/rpt_family="MERSB"
14207. .14267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43599 TCCATGAGCTTCCTGATCTT 43580
         rpt family="AluJo" 2308. .12374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC148328.3 GI:51854667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 95.04
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
repeat_region
                            repeat_region
                                                         repeat_region
                                                                                                                     repeat_region
                                                                                                                                                   repeat_region
                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
AC148328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

```
repeat_region
                                                          Mileon, R. K.
Direct Submission
L. Submitted (02-SEP-2004) Genome Sequencing Center, 4444 Forest Park
Direct Submission
Submitted (02-SEP-2004) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
St. Direct Submission
AL Submitsion
Submitted (28-JAN-2005) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St. Louis,
MO 63108, USA
On Sep 2, 2004 this sequence version replaced gi:50300734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The RPCI-24 BAC Library has been constructed by Pieter de Jong and coworkers (http://www.chori.org) from male GSPB/6J mouse spleen and/or brain genomic DNA. The Clone and detailed information can be obtained from Pleter de Jong and coworkers at http://www.chori.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mapping information for this clone was provided by Dr. Wes Warren, Department of Genetics, Washington University, St. Louis MO. For additional information about the map position of this sequence, see http://genome.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence was finished as follows unless otherwise noted: all regions were double stranded, sequenced with an alternate chemistry, or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was confirmed by restriction digest.
Submitted (15-JUL-2004) Genome Sequencing Center, 4444 Forest Park
Parkway, St. Louis, MO 63108, USA
4 (bases 1 to 167164)
                                                                                                                                                                                                                                                                                                                                              NEIGHBORING SEQUENCE INFORMATION:
This sequence is the entire insert of the clone.
Location/Qualifiers
1. .167164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/chromosome="9"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /map="9"
/clone="RP24-329C11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone_lib="RPCI-24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780. ...1125
/rpt_family="MaLR"
1147. ..1474
/rpt_family="MaLR"
1491. .1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1491. .1890
/rpt_family="Malk"
2024. .2937
/rpt_family="L1"
3037. .3077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_family="B4"
81. .241
/rpt_family="MaLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48. ... 728 |
rpt_family="ERVL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          198. . 527
rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MAPPING INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NOTICE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bource
                                                                      AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                        AUTHORS
TITLE
  JOURNAL
                                                                                                                                                                                                                                 JOURNAL
                                              REFERENCE
                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                       COMMENT
```

```
rpt_family="RMER17C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="ERVL"
                                                     /rpt_family="Alu"
3471. .3574
/rpt_family="B4"
3597. .3885
                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="L1"
9244. .9358
/rpt_family="Alu"
9253. .9383
        rpt_family="MalR"
                                                                                                                                                                                                                                                                                                                                                                                                           9253. .9383
/rpt_family="B4"
10211. ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="MaLR"
2974. .13055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /3663. 13956
/rpt_family="B4"
14034. 14110
/rpt_family="B4"
14111. 15039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="ERVK'
15040. .15151
                                                                                                                                                                   /rpt_family="L1"
6507. 6677
/rpt_family="B4"
6719. 6793
                                                                                                                                                                                                                                                       /rpt_family="Alu"
7450. 7511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="B4"
15344. 15457
/rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpt family="Alu" 3302. .13404
                                                                                                                                             /rpt_family="Alu"
6379. .6454
                                                                                                                                                                                                                                                                                                                                                           rpt_family="Alu"
1892. .9136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_family="B4"
                                                                                                                                                                                                                                   /rpt_family="L1"
7398. .7457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="L1"
3415. .13560
                                                                                                                                                                                                               /rpt_family="L1"
6835. .7054
                               rpt_family="B4"
                                                                                                                        /rpt_family="B4"
5953. .6101
                                                                                                                                                                                                                                                                                      'rpt_family="ID"
                                                                                                                                                                                                                                                                                                                          3145. .8278
/rpt_family="B4"
3635. .8775
                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpt_family="ID" 0305. .10491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="B2"
0507. .10690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7. .10690
family="B4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family="B4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             family="B2"
                                                                                                                                                                                                                                                                                                              /rpt_family="ID"
3145. .8278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family="B4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .12627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpt_family="E
2794. .12939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .13598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt_fa
2468.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpt_fa
3561.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_fa
0880.
repeat_region
                     repeat_region
                                           repeat_region
                                                                   repeat_region
                                                                                         repeat_region
                                                                                                               repeat_region
                                                                                                                                      repeat_region
                                                                                                                                                           repeat_region
                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          92.0%; Score 18.4; DB 8; Length 170892; 95.0%; Pred. No. 3e+02; 1; Indels 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percentage of bases with a quality value >= 40 : 99 %.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
1. .170892
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="genomic_DNA"
/db_xref="taxon:9606"
/chromosome="14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="C-2506J14"
/clone lib="CalTech-D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19255 TCCTTGAGCTTCCTGAGCTT 19236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search completed: May 4, 2006, 03:51:53
Job time: 473.368 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                       Overall quality chart :
Range : bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6534
7803
19454
48871
80597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 95.0
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - 89
- 99
                                                                                                                                                                                                                                                                                                                                                                                                 Range
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₹.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
Submitted (27-APR-2001) Genoscope - Centre National de Sequencage :
BP 191 91006 EVRY cedex - FRANCE (E-mail : segref@genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CNSO7EES 170892 bp DNA linear PRI 28-APR-2001
Human chromosome 14 DNA sequence BAC C-2506J14 of library CalTech-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hominidae, Homo.

1 (bases 1 to 170892)

Heilig,R., Petit,J.L., Vico,V., Dasilva,C., Robert,C., Wincker,P.,
Brottier,P., Cattolico,L., Barbe,V., Pelletier,E., Artiguenave,F.,
Levy,M., Eckenberg,R., Bruls,T., deBerardinis,V., Cruaud,C.,
Gyapay,G., Saurin,W. and Weissenbach,J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from chromosome 14 of Homo sapiens (Human), complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match 92.0%; Score 18.4; DB 9; Length 167164; Best Local Similarity 95.0%; Pred. No. 3e+02; Matches 19; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Web site: http://www.genoscope.cns.fr/
Contact: SeqRef@genoscope.cns.fr
                                                                                                                                                                                                                                                                                                                                                                                                                     / Type feamily="B4" | 1687], 17017 | 17017 | 17017 | 17017 | 17018 | 17018 | 17018 | 17018 | 17018 | 17018 | 17018 | 17018 | 17018 | 17018 | 18005 | 18280 | 1827], 18389 | 18457, 18586 | 18613 | 18613 | 18613 | 18613 | 18613 | 18613 | 18613 | 18613 | 18618 | 18613 | 18613 | 18613 | 18613 | 18613 | 18613 | 18613 | 18618 | 18613 | 18613 | 18618 | 18613 | 18618 | 18613 | 18618 | 18618 | 18613 | 18618 | 18613 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 18618 | 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53392 TCCATGAGCTTCCTGAGCAT 53411
| 15582. | 15976 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 1500 | | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="Alu"
19834. .19959
/rpt_family="MalR"
                                                                                                                                                                                                                                                                                                                                                       rpt_family="MaLR"
6591. .16681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="B2"
18705. .18791
/rpt_family="ID"
19803. .19907
                                                                                                                                                                                                                                                          'rpt_family="B4"
6247, .16590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL445885
AL445885.1 GI:11024568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished
2 (bases 1 to 170892)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genoscope
                       repeat_region
                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                repeat_region
                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CNS07EES/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
```

g ઠે

This Page Blank (uspto)

OM nucleic

Run on:

Sequence:

Searched:

```
Aad60259 Oligonucl
Adg68110 Unmethyla
Adi01050 Immunosti
Adm99019 Immunosti
Ado04735 CpG oligo
Adq07614 Nucleotid
Aaf98908 Immunosti
Aaf98967 Immunosti
Aaf9866 Immunosti
Abs78387 Amgiogene
Abs77543 Angiogene
Abs77543 Angiogene
Abs77716 Angiogene
Abs77716 Angiogene
Abs77716 Angiogene
Abs77716 Angiogene
Abs239153 Immunosti
Abs22889 Phosphoro
Accessiva Immunosti
Adb36469 Immunosti
Adb36471 Immunosti
Adb36410 Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to an HIV vaccine comprising an HIV antigen and an immunostimulatory oligonucleotide (AAF59501-AAF59508). With the exception of oligonucleotide WD1005 (AAF9505), the immunostimulatory oligonucleotides contain at least one unmethylated CpG motif. In preferred embodiments the internucleotide linkage is phosphorodithioate, although phosphodiester and other internucleotide bonds, or mixtures of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New vaccine formulation comprising human immunodeficiency virus (HIV) antigen and immunostimulatory CpG oligonucleotide, useful for preventing and treating HIV infections in a patient.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunostimulatory oligonucleotide; adjuvant; HIV antigen; HIV infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Immunostimulatory oligonucleotide WD1005 for use in an HIV vaccine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS
                                                               AAF99666
ABS78387
ABS77543
ABS777608
ABS77716
ABL39153
ABL39154
ABL39154
ABL39154
ABC22889
ABZ22889
ABZ22889
ABZ2889
ABZ2889
ABZ2889
ABZ2889
ABZ2889
ABZ369
ABZ370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADM99019
ADO04735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vaccine; prophylaxis; treatment; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 10; Page 17; 23pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF59505 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-JUN-2000; 2000WO-EP005998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-JUN-1999; 99GB-00015205.
31-JAN-2000; 2000GB-00002200.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-APR-2001 (first entry)
        WPI; 2001-122974/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Voss G;
      WO200100232-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Garcon N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
        AAF59505;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF59505
      Aaf59505 Immunosti
Aaf27751 P. falcip
Abk48089 Non-CpG o
Abg78403 Angiogene
Abl39151 Immunosti
Ach03223 Immunosti
Adb37184 Immunosti
Adb37184 Immunosti
Adb6974 Human RoC
Adp6974 Human RoC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Adč16613 Plant CDN
Abk5229 CDNA enco
Aav52574 Unmethyla
Aav27748 Immunosti
Aav27674 Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IL-12 sec
Immune re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CpG motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phosphoro
                                                                                                                                         4, 2006, 01:23:12; Search time 150.46 Seconds (without alignments) 885.910 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aaz41947 I
Aaz48023 I
Aah50578 C
Aah19258 F
                         GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                                                                            9993994
                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                    4996997 segs, 3332346308 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                     nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABL39151
ACH03223
ADB37184
ADU90203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADP69744
ADT16613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF27751
ABK48089
ABS78403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ48023
AAH50578
AAH19258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABK52229
AAV52574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV27748
AAV27674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4AZ41947
                                                                                                                                                                                                                                                                 1 tccatgagcttcctgagctt 20
                                                                                                                                                                                                                                                                                                                            Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               geneseqn2003bs:*
geneseqn2003cs:*
geneseqn2003ds:*
geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geneseqn2002as:*geneseqn2002bs:*geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 geneseqn2004bs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              geneseqn2001as:*geneseqn2001bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      geneseqn2005s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          geneseqn1990s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           geneseqn2000s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   geneseqn1980s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                seq length: 0
seq length: 200000000
                                                                                                                                                                                                                US-10-789-758A-5
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              222222222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N_Geneseq_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .*
Query
Match Length D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
20
20
20
20
20
20
312477
                                                                                                                                                                                                                                                                                                         IDENTITY NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               118.4
17.4
17.4
17.1
17.1
17.1
17.1
17.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                000000000
                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                       ı
```

88

Minimum Maximum Database

Result

Š.

υυ

Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to a method for stimulating an immune response. The method comprises administering an immunostimulatory nucleic acid to a non-rodent subject in sufficient quantity to stimulate an immune response. The present sequence is one such immunostimulatory nucleic acid. The immunostimulatory nucleic acids can be pyrimidine rich (py-rich) or thymidine (T) rich. The method is used to vaccinate subjects against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma, hasmophilus, campylobacter, clostridium, Becherichia coll and/or staphylococcus), fungal antigens and/or parasitic antigens. The method is also useful for preventing cancer, asthma, infectious disease, allergy or immune deliciency. The present sequence can also be used to redirect a full immune response and to activate immune cells. Note: the present sequence may have a phosphorothioste backbone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vaccine, cytostatic, virucidal, bactericidal, fungicidal, anti-parasitic, immunetimulatory, tumour; viral infection, bacterial infection, fungal infection, parasitic infection, cancer, asthm, infection and an allergy, immune deficiency, phosphorothicate; ss.
linkages are within the scope of the invention. The HIV antigen may be selected from gp160, gp120, Nef, Tat, and Nef or Tat derivatives or fusion proteins. The vaccine is used for the prophylaxis or treatment of HIV infection in a patient. The present sequence represents a specifically claimed immunostimulatory oligonucleotide, WD1005, for use in the vaccine of the invention. This oligonucleotide does not contain a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vaccinating against tumors, infectious diseases, allergies and asthma using immunostimulatory Py-rich and TG nucleic acids.
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                     ö
                                                                                                                                                                                           100.0%; Score 20; DB 4; Length 20; 100.0%; Pred. No. 11;
                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                   ö
                                                                                                                                                      Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunostimulatory nucleic acid #798.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 101; Page 55; 338pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vollmer J;
                                                                                                                                                                                                                                                                           1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                 1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                              AAF99682 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-SEP-2000; 2000WO-US026383.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-SEP-1999; 99US-0156113P.
27-SEP-1999; 99US-0156135P.
23-AUG-2000; 2000US-0227436P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (IOWA ) UNIV IOWA RES FOUND.
(COLE-) COLEY PHARM GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                 Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Krieg AM, Schetter C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-273485/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200122972-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                  motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF99682;
                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                  888888888
                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                               유
```

```
ö
                          ò
                                                                                                                                                                                                                                      Plasmodium falciparum; malaria; CpG oligonucleotide; vaccine; sporozoite;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            New vaccine formulation, useful for preventing and treating plasmodium infection in a patient, comprises malaria antigen and immunostimulatory CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes a vaccine comprising a malaria antigen and an immunostimulatory CpG oligonucleotide. This is useful in the prevention and treatment of malaria caused by Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Non-CpG oligonucleotide motif #2 used to induce a Th2 immune response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Non-autoimmune Th1 mediated disease; autoimmune disease; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB 5; Length 20; 100.0%; Pred. No. 11;
100.0%; Score 20; DB 4; Length 20; 100.0%; Pred. No. 11; 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                              P. falciparum vaccine CpG oligonucleotide WD1005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Migmatches
                                                                                                                                                                                                                                                                                                                                                                                                (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGAGCTTCCTGAGCTT 20
                                                                  1 TCCATGAGCTTCCTGAGCTT 20
                                                    1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 8; Page 16; 22pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В.
                                                                                                                                        ВР
                                                                                                                                                                                                                                                                                                                                                 23-JUN-2000; 2000WO-EP005841.
                                                                                                                                                                                                                                                                                                                                                                                                                        VOSS G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                       AAF27751 standard; DNA; 20
                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20; Conservative
                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABK48089 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                       Cohen J, Garcon N,
                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-112392/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
              Local Similarity
ses 20; Conser
                                                                                                                                                                                                                                                                                                  WO200100231-A2
                                                                                                                                                                                                                                                                          Unidentified.
                                                                                                                                                                                                                                                                                                                                                                         29-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-JUL-2002
                                                                                                                                                                                       03-APR-2001
                                                                                                                                                                                                                                                                                                                          04-JAN-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABK48089;
                                                                                                                                                               AAF27751;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                             Matches
                                                                                                             RESULT 3
                                                                                                                                                                                                                                                    dB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABK48089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXEXEXEX
                                                                                                                                        ଚ
                                                     ઢ
                                                                         셤
```

Gaps

; 0

Indels

ö

Mismatches

ö

20; Conservative

Matches

ò 셤

1 TCCATGAGCTTCCTGAGCTT 20 rccargagerrccrgagerr 20

```
Inducing an antigen specific immune response useful in treating Thi-
mediated inflammatory disorders, e.g., (non)-autoimmune diseases or
cancer, comprises administering a Th2-immunostimulatory nucleic acid and
        Crohn's disease; systemic lupus erythematosus; SLE; myasthemia gravis; Hashimoto's thyroiditis; Goodpasture's syndrome; pemphigus; Grave's disease; autonimune hasemolytic ansemia; scleroderma; autonimune thrombocytopenic purpura; mixed connective tissue disease; polymyositis; pernicious anaemia; idiopathic Addison's disease; autonimune-associated infertility; glomerulonephritis; psoriasis; bullous pemphigoid; Sjogren's syndrome; insulin resistance; diabetes mallitus; inflammatory disorder; organ allograft rejection; Hepatitis B infection; unexplained recurrent abortion;
infectious disease; Th1 immune response; rheumatoid arthritis;
                                                                                                                                                                                                                   /note= "Phosphorothioate backbone"
                                                                                                         Hepatitis B infection, unexplained recu
parasitic infection, non-CpG motif, ss.
                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                        base= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example; Page 27; 50pp; English.
                                                                                                                                                                                                                                                                                            22-JAN-2001; 2001US-00768012
                                                                                                                                                                                                                                                                                                                    20-JAN-2000; 2000US-0177461P
                                                                                                                                                                                              ø
                                                                                                                                                                                                                                                                                                                                                                               Davis HL;
                                                                                                                                                                                *tag=
                                                                                                                                                                                                                                                                                                                                           MCCL/) MCCLUSKIE M J.
                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-138610/18.
                                                                                                                                                                                                                                                                                                                                                      DAVI/) DAVIS H L.
                                                                                                                                                                                                                                             US2001044416-A1
                                                                                                                                                                                                                                                                                                                                                                               Mccluskie MJ,
                                                                                                                                                                               modified_base
                                                                                                                                                                                                                                                                     22-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an antigen
                                                                                                                                              Synthetic
                                                                                                                                                                    Key
8XCCCCCCCCCCCCCCCCCCCCCCCX
```

Angiogenesis inhibitor; ss; angiogenesis; solid tumour growth; tumour metastasis; precancerous lesion; rheumatoid arthritis; psoriasis; diabetic retinopathy; retinopathy of prematurity; macular degeneration; corneal graft rejection; neovascular glaucoma; retrolental fibroplasia;

Angiogenesis inhibitory oligonucleotide #887.

(first entry)

13-DEC-2002

ABS78403;

ABS78403 standard; DNA; 20 BP

RESULT 5 ABS78403

rubeosis; Osler-Webber Syndrome, myocardial angiogenesis; plaque neovascularisation; telangiectasia; haemophilac joint; angiofibroma; wound granulation; intestinal adhesion; atherosclerosis; scleroderma; hypertrophic scar.

dermally or parenterally with an antigen. to stimulate an antibody dependent cellular cytotoxic immune response, to treat non-autoimmune Thi mediated disease and autoimmune disease, to prevent infectious diseases and cancer. The methods are useful for treating and preventing diseases and cancer. The methods are useful for treating and preventing diseases are associated with a Thi immune response, or for creating a Thi environment for treating disorders that are sensitive to a Thi immune response. This mediated disorders include autoimmune diseases (e.g., rheumatoid carthrila, crohn's disease, systemic lupus erythematosus (SEB), arthrilas, crohn's disease, systemic lupus erythematosus (SEB), autoimmune encephalomyelitis, myasthenia gravis, Hashimoto's thyroiditis, Goodpasture's syndrome, pemphigus, Grave's disease, autoimmune haemolytic cansemia, autoimmune hromboticy trisque disease, autoimmune associated infertility, glomerulonephirits, bullous pemphigoid, Sigdren's syndrome, infertility, glomerulonephirits, bullous pemphigoid, Sigdren's syndrome, insulin resistance, and autoimmune disbetes mellitus) and non-autoimmune diseases (e.g., psoriasis, Thi inflammatory disorders, solid organ allografit rejection, symptoms associated with Hepatitis B infection, included the symptoms associated with Hepatitis B infection, included the symptoms associated with Hepatitis B infection, included when the symptoms associated with Hepatitis B infection, included the symptoms associated with Hepatitis B infection, included when the symptoms associated with Hepatitis B infection, included when the symptoms associated with Hepatitis B infection, included when the symptoms are minimally and control or the symptoms associated with the symptoms are minimally and control or the symptoms associated with the symptoms and the symptoms associated with Hepatitis B infection, included the symptoms are symptoms associated with the symptoms and the symptoms are symptoms and symptoms are symptoms and symptoms are symptoms and symptoms are sy present sequence represents a non-CpG oligonucleotide motif used to induce a Th2 immune response as described in the methods of the invention insulin-dependent diabetes mellitus, multiple sclerosis, silent thyroiditis, and unexplained recurrent abortion). The methods are also useful for treating or preventing parasitic infections, infectious diseases, cancer, for stimulating antibody dependent cellular cytotoxic invention relates to methods using a Th2-immunostimulatory nucleic mmune response and for inducing an antigen specific response. The

100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 11;

Best Local Similarity

Query Match

Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;

```
The invention relates to inhibiting angiogenesis in a subject, comprising administering at least one antiangiogenic nucleic acid molecule. Also included is a kit comprising a first container housing the antiangiogenic nucleic acids, and instructions for administering them to a subject having a condition characterised by unwanted angiogenesis. The method is useful for inhibiting angiogenesis associated with solid tumour growth, tumour metastasis, precancerous lession, rheumatoid arthritis, psoriasis, diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, rubeosis, Osler-Webber Syndrome, myocardial angiogenesis, plaque neovascularisation, telangiectasia, haemophiliac joints, angiofibroma, hypertrophic scars. The present sequence is an antianglogenic nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 11; 0; Indels iive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 2; Page 35; 276pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; F1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rccargagcrrccrgagcrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acid of the invention
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

Inhibiting angiogenesis in a subject, involves administering at least one

antiangiogenic nucleic acid molecule to the subject.

(COLE-) COLEY PHARM GROUP INC.

WPI; 2002-566690/60.

Bratzler RL;

14-DEC-2001; 2001WO-US048458. 14-DEC-2000; 2000US-0255534P.

WO200253141-A2.

Synthetic.

11-JUL-2002.

ABL3915

```
The invention describes a method of treating non-allergic inflammatory disease comprising administering to a subject having or at risk of developing a non-allergic inflammatory disease an immunostimulatory nucleic acid for prevention or treatment of the disease. The method is useful for treating non-allergic inflammatory diseases, such as psoriasis, eczema, allergic context dermatitis, latex dermatitis or inflammatory bowel disease e.g., ulcerative colitis or Crohn's disease. This sequence represents an immunostimulatory nucleic acid
                                                                                                      Immunostimulatory, antiinflammatory, dermatological, antipsoriatic, antiulcer; gene therapy, vaccine, non-allergic inflammatory disease, psoriasis, eczema, allergic contact dermatitis, latex dermatitis; latex inflammatory bowel disease, ulcerative colitis, crohn's disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Treating non-allergic inflammatory diseases, such as psoriasis, ecze allergic contact dermatitis, latex dermatitis or inflammatory bowel disease by administering an immunostimulatory nucleic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ds; allergy; asthma; poly-G nucleic acid; aerosol formulation; hypo-responsive subject; immunostimulatory.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 20; DB 9; Length 20; 100.0%; Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 100.0%; Pred. No. 11;
Matches 20; Conservative 0; Mismatches
                                                              Immunostimulatory nucleic acid #858.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunostimulatory nucleic acid #798.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 32; 229pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP
                                                                                                                                                                                                                                                                                                                                                       29-MAR-2002; 2002US-00112653.
                                                                                                                                                                                                                                                                                                                                                                                               29-MAR-2001; 2001US-0279642P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADB37184 standard; DNA; 20
                  25-SEP-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-521815/49.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Krieg AM, Berg DJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                           (KRIE/) KRIEG A M. (BERG/) BERG D J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US2003087848-A1.
                                                                                                                                                                                                                                                               US2003050268-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-DEC-2003
                                                                                                                                                                                                                                                                                                           13-MAR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADB37184;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADB37184
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ծ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to methods for treating or preventing cancer, involving administering to a subject having or at risk of developing cancer immunostimulatory nucleic acids that induce expression of cell surface antigens and antibodies. The methods are useful for treating or preventing cancer such as basal cell carcinoma, bladder cancer, bone cancer, brain and central nervous system (CNS) cancer, brass cancer, ocsophageal cancer, colon and rectum cancer, connective tissue cancer, ocsophageal cancer, lung cancer, kidney cancer, laryux cancer, leukaemia, liver cancer, lung cancer, kidney cancer, laryux cancer, pancreatic cancer, nyeloma, oral cavity cancer, ovarian cancer, pancreatic cancer, prostate cancer, rabdomyosarcoma, skin cancer, stomach cancer, testicular cancer, and uterine cancer. The present sequence is an immunostimulatory oligonucleotide described in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Treating or preventing cancer, such as basal cell carcinoma, comprises administering immunostimulatory nucleic acids that induce expression of cell surface antigens and antibodies to a subject having or at risk of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                   Antibody-induced cell lysis; cancer; immunostimulatory; CD20; angiogenesis; metastasis; cytostatic; phosphorothioate backbone; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 11; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "phosphorothicate backbone"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                           Immunostimulatory nucleic acid SEQ ID NO: 573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure, Page 241; 312pp; English.
                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 rccardadcriccrdadcrr 20
                                                                                                                                                                                                                                                                                                                                                                                                 bases OTHER
                                       ABL39151 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACH03223 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-JUN-2001, 2001WO-US020154.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-JUN-2000; 2000US-0213346P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (IOWA ) UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                                       1. .20
/*tag= a
                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hartmann G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI, 2002-154611/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
les 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        developing cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200197843-A2
                                                                                                                                                                                                                                                                                                                                                     modified base
                                                                                                                               16-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Weiner G,
                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
```

ö

Gaps

ö

Indels

.. 0

02-FEB-2001; 2001US-00776479

ACH03223

RESULT 7 ACH03223

Best Loca Matches

ð

ô

```
The invention relates to a method of suppressing a symptom of an allergic response in a subject by administering a first and second dose of an immunostimulatory nucleic acid that comprises a nucleotide sequence comprising 5'-cg-3', and where the second dose is administered from 1 day to 8 weeks after the first dose. The methods and compositions of the present invention are useful for the treatment or prevention of asthma and allery, including rhinitis, urticaria and acopic dermatitis, using an immunostimulatory nucleic acid alone or in combination with other medicaments. They can also be used in preventing bacterial and viral infections. This sequence represents an oligonucleotide used in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a new compound, targeted to a nucleic acid encoding ROCK 1, that specifically hybridises with the nucleic acid encoding ROCK 1 and inhibits expression of ROCK 1. The oligonucleotide compound is useful for preparing a composition for treating hyperproliferative disorder, e.g. cancer. The present sequence represents human ROCK 1 DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New oligonucleotide compound that inhibits expression of ROCK 1, usef for preparing a composition for treating hyperproliferative disorder,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seguence 312477 BP; 92110 A; 58460 C; 60155 G; 98196 T; 0 U; 3556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 18.4; DB 12; Length 312477;
Pred. No. 2e+02;
                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dв; gene; human; ROCK 1; hyperproliferative disorder; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                    Score 20; DB 13; Length
Pred. No. 11;
                                                                                                                                                                                                                                                   Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 15; SEQ ID NO 11; 195pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP
                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADP69744 standard; DNA; 312477
                                                                                                                                                                                                                                                                                        100.0%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                      TCCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                           1 rccargagerrecraagerr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-DEC-2002; 2002US-00317883.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-DEC-2002; 2002US-00317883.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92.0%;
95.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19; Conservative
                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                            method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cowsert LM, Dobie KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-449381/42.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human ROCK 1 DNA #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US2004115641-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e.g., cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-JUN-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-SEP-2004
                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADP69744;
                                                                                                                                                                                                                                                                                                                                                                        Н
                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADP69744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ଚ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Suppressing allergies, including asthma, rhinitis, urticaria and atopic dermatitis, in a subject, comprises administering a first and second dose of an immunostimulatory nucleic acid.
                                                                                                                                                                                                                                                                                                        The invention relates to a method of treating or preventing allergy or asthma which comprises administering to a subject a poly-G nucleic acid in an aerosol formulation. The methods and compositions of the present invention are useful for diagnosing and/or treating asthma and allergy especially in a hypo-responsive subject. The present sequence represents an immunostimulatory nucleic acid of the invention.
                                                                                                                                                                                                            Treating and/or preventing allergy or asthma using an immunostimulatory nucleic acid alone or in combination with an asthma/allergy medicament.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     se; antiasthmatic; antiallergic; dermatological; antiinflammatory;
antibacterial; virucide; immunoglobulin E antagonist; allergy;
immunostimulator; asthma; rhinitis; urticaria; dermatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20; DB 9; Length 20;
Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Allergic response suppressor oligonucleotide #887.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 887; 235pp; English
                                                                                                                                   Fouron Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bacterial infection; viral infection.
                                                                                                                                                                                                                                                                        Disclosure, Page 17; 221pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 rccarcaccrrccrcaccrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADU90203 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-FEB-2000; 2000US-0179991P.
                  03-FEB-2000; 2000US-0179991P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2004; 2004US-00831778
                                                                                                                                   Bratzler RL, Petersen DM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ¥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bratzler RL, Petersen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (BRAT/) BRATZLER R L.
(PETE/) PETERSEN D M.
                                                     BRATZLER R L.
PETERSEN D M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-833006/82.
                                                                                                                                                                       WPI; 2003-657977/62.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FOURON Y.
                                                                                            (FOUR/) FOURON Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2004235774-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-FEB-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-NOV-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PETE/)
(FOUR/)
                                                       (BRAT/)
                                                                           (PETE/)
```

셤 ઠે

ö

Other;

The invention relates a recombinant DNA construct comprising a polypucleotide having any of 5544 mucleotide sequences (CDNAs SEQ ID NO: 1-5545-11088). The CDNAs and proteins are from corn, soybean, Arabidopsis, wheat and rape but the specification does not indicate which sequences is derived from which organism. Also included is a method of producing a plant having an improved property, comprising transforming a plant with a recombinant DNA construct comprising a promoter region to plant with a recombinant DNA construct comprising a promoter region collapsety is selected from improving plant coll dolarance, for manipulating growth rate in plant cells by modification of the cell cycle pathway, for improving plant drought tolerance, for improving plant tolerance to herbicides, for increasing the rate of plant growth regulators, for improving plant tolerance to herbicides, for increasing the rate of complogous recombination in plants, for lignin production, for improving plant tolerance to herbicides, for improving plant tolerance to extreme osmotic conditions, for improving plant tolerance to extreme osmotic conditions, for improving plant tolerance to extreme osmotic conditions, for improving plant under an extreme osmotic condition. For improving plant clarance to pathydrate, nitrogen or phosphorus use and/or content, for modification of carbohydrate, nitrogen or phosphorus use and/or content, for the polymucleotide may development under at least one stress condition. The polymucleotide may development under at least one stress condition. The polymucleotide may development under at least one stress condition. The polymucleotide may development under at least one stress condition. The polymucleotide in particular for producing transgenic plant produce to extreme osmotic and increased yield, improved plant collerance to extreme osmotic and drought conditions, New recombinant DNA constructs useful in the field of biochemistry and genetics, and in particular for producing transgenic plants with improved Plant; ss; gene; transgenic; cold tolerance; growth rate; drought tolerance; disease resistance; galactomannan production; plant growth regulator; heat tolerance; herbicide tolerance; lignin production; extreme osmocitc condition tolerance; pathogens resistance; pest resistance; yield improvement; seed oil yield; Claim 1; SEQ ID NO 1939; 14pp; English. 184253 TCCATGAGCTTCCTGATCTT 184272 ADT16613 standard; cDNA; 2616 BP. 18-DEC-2003; 2003US-00739930. 28-APR-2003; 2003US-00424599. 28-APR-2003; 2003US-00425115. genetics, and in particular biological characteristics. 13-JAN-2005 (first entry) Plant cDNA, Seg ID 1939. WPI; 2004-757369/74. (KOVA/) KOVALIC D K. seed protein yield. US2004216190-A1. Viridiplantae. 28-OCT-2004 ADT16613; Kovalic 셤

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; Cytochrome P450; Subfamily XXVIIA; single nucleotide polymorphism; Steroid 2.7-Hydroxylase; Cerebrotendinous Xanthomatosis Polypeptide 1; CYP27A1; SNP; drug screening; cerebrotendinous xanthomatosis; chromosome 2q33-qter; gene; ss.
tolerance to plant pests or pathogens. They can also be used in physical arrays of molecules, plant breeding markers, computer-based storage and analysis systems. The present sequence is one of the 5544 plant cDNA sequences of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from USPTO at sequence.uspto.gov/sequence.html?DocID=20040216190.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /-candard_name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 4 (PS4)"
3501. .5910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /standard_name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 5 (PS5)"
replace(5770,G)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'standard name= "Single Nucleotide Polymorphism (SNP)"
note= "Polymorphic site 1 (PS1)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /ocamdard name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 2 (PS2)"
3410. .3600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ._.wwward name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 3 (PS3)"
replace(3592,A)
/*tan- '
                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                           Score 17.4; DB 13; Length 2616; Pred. No. 3.3e+02;
                                                                                                                                                                                                          Sequence 2616 BP; 733 A; 583 C; 657 G; 643 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Human CYP27A1 protein"
                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA encoding human CYP27A1 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABK52229 standard; cDNA; 12718 BP
                                                                                                                                                                                                                                                                                                                                                                                                                     312 CCATGAGCTCCCTGAGCTT 294
                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         replace (3564, A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  replace (3611, A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            replace(1342,A)
/*tag= e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              replace (564, C)
                                                                                                                                                                                                                                                        87.0%;
94.7%;
                                                                                                                                                                                                                                                                                                                                                                   CCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            001. .1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .8719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      256. .3409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= c
/product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 number= 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Д
                                                                                                                                                                                                                                        Query Match
Best Local Similarity 94.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 variation
                                                                                                                                                                                                                                                                                                                                                                   ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABK52229;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
ABK52229/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A STATES A S
        888888888
                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                             a
```

```
The present invention relates to a new human Cytochrome P450, Subfamily XXVIIA, (Steroid 27-Hydroxylase, Cerebrotendinous Xanthomatosis)

CC XXVIIA, (Steroid 27-Hydroxylase, Cerebrotendinous Xanthomatosis)

CC invention comprises a sequence which is a polymochic variant for a circuit of a reference sequence for the CYP27A1 gene or its fragment, or a polymorphic variant of a reference sequence for a CYP27A1 cDNA or its fragment. The invention is useful for screening for drugs by contacting the CYP27A1 cplymorphic variant with a candidate agent and assaying for binding activity. The invention is also useful in studying the expression and correction of CYP27A1, and in expressing CYP27A1 protein for use in screening for candidate drugs to treat diseases related to CYP27A1 sogenes in vivo screening and testing of drugs targeted against compounds for in vivo screening and testing of drugs targeted against CYP27A1 protein, and for testing the efficacy of therapeutic agents and compounds for diseases associated with CYP27A1 activity, e.g. cerebrotening and testing of the rapectic agents and compounds for diseases associated with CYP27A1 activity, e.g. cerebrotening the effect of the variation on the biological creating CYP27A1 for studying the effect of the variation on the biological creating CYP27A1 as well as on the binding affinity of candidate drugs cartivity of CYP27A1 as well as on the binding affinity of candidate drugs cartivity of CYP27A1 as well as every especial the human CYP27A1 gene content of the invention of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unmethylated CpG dinucleotide; immune response; bacterial meningitis; natural killer cell activation; NK cell; Th2 response; neonatal sepsis; pulmonary disorder; asthma; environmentally induced airway disease; bacterial infection; endotoxaemia; therapy; cystic fibrosis;
                                                                                                                                                                                                                                          Novel isolated human Cytochrome P450, Subfamily XXVIIA, Steroid 27-Hydroxylase, Cerebrotendinous Xanthomatosis 1 gene, useful for therapeutic purposes, and for studying expression and function of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 12718 BP; 3189 A; 2997 C; 3093 G; 3225 T; 0 U; 214 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87.0%; Score 17.4; DB 6; Length 12718; 94.7%; Pred. No. 4e+02; ive 0; Mismatches 1; Indels 0;
                                                                                                                                                                       Sanchis A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2833 CCATGAGTTTCCTGAGCTT 2815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 CCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                       Han J,
                                                                                                                                                                                                                                                                                                              Claim 1; Fig 1; 90pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unmethylated CpG dinucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV52574 standard; DNA; 20 BP
                                                                                                                                           (GENA-) GENAISSANCE PHARM INC
                                                                                    15-OCT-2001; 2001WO-US042727.
                                                                                                                13-OCT-2000; 2000US-0239942P.
  /number= 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                     Anastasio AE, Chew A,
                                                                                                                                                                                                  WPI; 2002-435436/46.
P-PSDB; AAU97675.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
es 18; Conserv
                             WO200230952-A2
                                                         18-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV52574;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                      gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ٤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*rag= ad
/standard_name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 14 (PS14)"
                                                                                                                                                                                                                                                                                                                                                                                   /*tag= s
/standard_name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 9 (PS9)"
5786. .7709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*rag= u
/standard_name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 10 (PS10)"
7710. .7876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *tag= w
standard name= "Single Nucleotide Polymorphism (SNP)"
note= "Polymorphic site 11 (PS11)"
             'standard name= "Single Nucleotide Polymorphism (SNP)" note= "Polymorphic site 6 (PS6)"
                                                                                                            /standard name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 7 (PS7)"
replace(5988,T)
                                                                                                                                                       /*rag= n
/standard_name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 8 (PS8)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= y
/standard_name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 12 (PS12)"
replace(8003,C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= z
/etag= z
/etandard_name= "Single Nucleotide Polymorphism (SNP)"
/note= "Polymorphic site 13 (PS13)"
8069. .8147
                                                                                                                                                                                                                                                                                                                                                                                                                                                            'number= 5
replace(6843,T)
                                                                                 replace (5970, T)
                                                                                                                                                                                                                                                                                                                                                                        eplace (6689, A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     replace (7843, T)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          eplace (7931,C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         replace (8441, T)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "rc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= ab
                                                                                                                                                                                                                                                        /*tag= p
/number= 4
6439. .6612
                                                                                                                                                                                                                                                                                                /*tag= q
/number= 4
6613. .6785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8600. .8719
/*tag= af
                                         .6110
                                                                                                                                                                                                                                           241. .6438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1234. .8446
/*tag= ac
/*tag= k
/standard_
                                                                     number= 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              number= 6
                                                                                                                                                                                                                                                                                                                                              н
                                                                                                                                                                                                                                                                                                                                           /*tag= r
/number= :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          number=
                                                                                                                                                                                                                              number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                number=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'number=
                                                                                  variation
                                                                                                                                           variation
                                                                                                                                                                                                                                                                                                                                                                        variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  intron
                                                                                                                                                                                                  intron
                                                                                                                                                                                                                                                                                     intron
                                                                                                                                                                                                                                                                                                                                                                                                                                intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                          exon
                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exon
```

Gaps

Use of subject

SON COURT OF COURT OF

```
AAV27641-751 represent immunostimulatory oligodeoxyribonucleotides (ODNs) of the invention. The ODNs contain at least one unmethylated CpG dinucleotide, and have the formula: 5' NIXIGXZNZ 3', where at least one nucleotide separates consecutive CpGs, XI is adenine, guanine, or thymine, X2 is cytosine or thymine, N is any nucleotide and NI+NZ is 0-26 bases with the provision that NI and NZ does not contain a CGG tetramer or more than one CGG or CGG trimer OR 5' NXIXZGXXXXX 3', where at least one nucleotide separates consecutive CpGs, XI and X2 are selected from CpGr CpG, CpA, ApT and ApA, X3and X4 are selected from TpT or CpT, N is any nucleotide and NI+NZ is 0-26 bases with the provision that NI and NZ does not contain a CGG tetramer or more than one CGG or CGG trimer. The
                                                                                                                                                                                                                                             New immunostimulatory nucleic acid molecules - which contain at least one unmethylated CpG dinncleotide, used for treating e.g. tumours, infections or autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               oDNs activate lymphocytes in a subject and redirect a subject's immune response from a Th2 to a Th1 (e.g. by inducing monocytic cells and other cells to produce Th1 cytokines, including IL-12, IFN-gamma and GM-CSF). The ODNs can be used to treat or prevent an asthmatic disorder, autoimmune diseases, in desensitisation therapy, as an artificial adjuvant during antibody generation in a mammal such as a mouse or a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunostimulatory; oligodeoxyribonucleotide; ODN;
unmethylated CpG dinucleotide; activate; lymphocyte; immune response;
Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease;
desensitisation therapy; artificial adjuvant; antibody generation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Immunostimulatory non-CpG phosphorothioate oligodeoxyribonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85.0%; Score 17; DB 2; Length 20; 100.0%; Pred. No. 2.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                  Disclosure, Page 61; 109pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45.0.
100.0%; Fry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-US019791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96US-00738652
97WO-US019791.
                                              96US-00738652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV27674 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 100.
nes 17; Conservative
                                                                                            (IOWA ) UNIV IOWA RES
                                                                                                                                                Krieg AM, Kline JN;
                                                                                                                                                                                                 WPI; 1998-272127/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-0CT-1996;
  30-OCT-1997;
                                                 30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9818810-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV27674;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV27674
ID AAV
     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This sequence represents an unmethylated CpG dinuclectide, and can be used in the method of the invention. The method is for treating a subject having, or at risk of having an acute decrement in air flow, comprising caministering a nucleic acid sequence containing at least one administering a nucleic acid sequence containing at least one dainistering a nucleic acid sequence containing at least one containing at least one mucleic acid sequence containing at least one dinucleotide affect an immune response in a subject by activating natural caller calls (NK) or redirecting a subject by activating natural to a Thi response by inducing monocytic and other calls to produce Thi cytokines. They can be used to treat pulmonary disorders having an immunologic component, such as sethma or environmentally induced airway disease. They can also be used to treat diseases associated with Grampositive bacterial infections or endotoxaemia including bacterial and liver cirrhosis, Gram-negative pheumonia, Gram-negative abdominal abscess, haemorrhagic shock, disseminated intravascular coagulation, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunostimulatory; oligodeoxyribonucleotide; ODN;
unmethylated (5pG dinucleotide; activate; lymphocyte; immune response;
Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease;
desensitisation therapy; artificial adjuvant; antibody generation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Use of nucleic acids containing an unmethylated CpG - for treating a subject having or at risk of having an acute decrement in air flow or inhibiting an inflammatory response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Immunostimulatory oligodeoxyribonucleotide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                an inflammatory response to lipopolysaccharide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0%; Pred. No. 2.5
Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 8; Page 42; 65pp; English.
     inflammatory bowel disease; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV27748 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 rccardadcrrccrdag 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                    98WO-US003678
                                                                                                                                                                                                                                                  97US-0039405P
                                                                                                                                                                                                                                                                                                   (IOWA ) UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                  Schwartz DA, Krieg AM,
                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-480941/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9818810-A1
                                                                                                                                                                                                    25-FEB-1998;
                                                                                                    WO9837919-A1
                                                                                                                                                                                                                                                     28-FEB-1997;
                                                                                                                                                   03-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-MAY-1998
                                                   Synthetic
```

AAV27748;

RESULT 14

용 ð

ö

Gaps

```
AAV27641-751 represent immunostimulatory oligodeoxyribonucleotides (ODNs) of the invention. The ODNs contain at least one unmethylated CpG dinucleotide, and have the formula: 5' N1X1CGXN2'3', where at least one uncleotide separates consecutive CpGs, X1 is adenine, guanine, or thymine, X2 is cytosine or thymine, N is any nucleotide and N1+N2 is 0-26 bases with the provision that N1 and N2 does not contain a CCGG tetramer or or more than one CCG or CGG trimer OR's NX1X2CGX3X4N 3', where at least one nucleotide separates consecutive CpGs, X1 and X2 are selected from GpT, GpG, GpA, ApT and ApA, X3and X4 are selected from TpT or CpT, N is con nucleotide and N1+N2 is 0-26 bases with the provision that N1 and N2 does not contain a CCGC tetramer or more than one CCG or CGG trimer. The CDNs activate lymphocytes in a subject and redirect a subject's immune response from a Th2 to a Th1 (e.g. by inducing monocytic cells and other CCC cells to produce Th1 cytokines, including IL-15. IFV-gamma and GM-CSF). The ODNs can be used to treat or prevent an asthmatic diseases, in desensitisation therapy, as an artificial contain a mammal such as a mouse or a
                                                                                                    New immunostimulatory nucleic acid molecules - which contain at least one unmethylated CpG dinucleotide, used for treating e.g. tumours, infections or autoimmune disease.
                                                                                                                                                                                                     Disclosure; Page 11; 109pp; English.
Krieg AM, Kline JN;
                                                   WPI; 1998-272127/24.
```

Query Match 85.0%; Score 17; DB 2; Length 20; Best Local Similarity 100.0%; Pred. No. 2.9e+02; Matches 17; Conservative 0; Mismatches 0; Indels 1 TCCATGAGCTTCCTGAG 17 ò 셤

Search completed: May 4, 2006, 02:44:17 Job time : 154.46 secs

Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;

ö

0; Gaps

This Page Blank (uspto)

٧,

Perfect score:

Sequence:

OM nucleic

Run on:

Minimum DB Maximum DB

Database

```
CK421251 AUF_IPSpn
BB470037 IPHGK0302
BB470038 IPHGK0302
CF971751 AUB IfLvr
BM028300 IPSkn0014
BB469162 IPHGK0121
AQ592441 HS 5455 A
CC091131 OM BB409
AW280520 fj41h04.y
CV995382 IPCGFr3 2
CK41146 AUF_IPHGK
CK425086 AUF_IPFK
CK425086 AUF_IPSC
AQ294613 HS 3029 A
BM028089 IPSkn0196
BM029009 IPSkn0196
BM0224669 BX524669
CA830455 1117007A1
AZ967380 2M0238K13
                                                                                                                                                                                                                                                                                                                        PUICX67TB ZM 0.6_1.0_KB Zea mays genomic clone ZMMBTa0554L14, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.

1 (bases 1 to 581)
Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T., Resnick, A., Fraser, C.M., Yuan, Y., San Miguel, P., Ma, J. and Bennetzen, J.
                                                                                                                                                                                                                  CL969124 OSIFCC017
CK051754 63810rsic
BU385990 603860165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:4577"
/clone="ZMMBTa0554114"
/clone=lib="ZM_06_1.0 KB"
/note="Vector: pCR4-T0PO; Site_1: EcoRI; 0.6-1.0 kb high
COT selected genomic DNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 95.0%; Score 19; DB 10; Length 581; Best Local Similarity 100.0%; Pred. No. 6.5e+02; Matches 19; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9712 Medical Center Drive, Rockville, MD 20850, USA 191: 301-838-5843 Fax: 301-838-6288 Email: whitelaw@tigr.org
                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
1. 581
Acganism="Zea mays"
/mol_type="genomic DNA"
/strain="B73"
CK411648
CK421251
BE470037
BE470037
CK971751
BM028300
BE463162
CM055241
CZ091131
AW280520
CK411146
CK411146
CK4125086
AM2294613
BM029888
BM029809
CK81365
CK81365
AZ967380
                                                                                                                                                                                                                   CL969124
                                                                                                                                                                                                                            CK051754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Maize Genomics Consortium
Unpublished (2003)
Other GSSs: PUICX67TD
Contact: Cathy Whitelaw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                       CG064553.1 GI:33936733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq primer: TR
Class: sheared ends
                                                                                                                   4493
4493
4493
4493
6622
6622
6634
6634
6634
6634
 887.0
887.0
887.0
887.0
887.0
887.0
887.0
887.0
887.0
887.0
                                                                                                                                                                                                                                                                                                                                                                                            Zea mays
Zea mays
                                                                                                                                                                                                                                                                                                                                                            CG064553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LIGE
 RESULT 1
CG064553
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
 0 0 0 0 0 0 0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CR201334 CR291334
CR201334 CR291334
CR808979 BASG004XG
BP084928
CF850403 PBMA014XB
AA414937 1M022X09
CB291961 UCRCS01
CZ222277 AIAA-aac6
CC510758 CH240 354
BH640052 1008033F0
BH640052 1008033F0
BU097976 94612ZG05
CC096512 CSU-K34.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DE12773 Oryzias 1
CK401820 AUF Ifint
BM028315 IpSkn0019
BE212988 IpBrn0138
BM028520 IpSkn0075
BM028472 IpSkn0064
BM028681 IpSkn0111
CK423072 AUF_IpSpn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CG064553 PUICX67TB
                                                                        4, 2006, 02:45:02 ; Search time 1417.59 Seconds (without alignments) 660.095 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                   82156650
            5.1.7
Biocceleration Ltd.
                                                                                                                                                                                             41078325 seqs, 23393541228 residues
                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
           GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                      Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                   - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CZ222277
CC510758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BU097976
CC096512
DE127737
CX401820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CF858979
BP084928
CF850403
AZ474937
CB291961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BH120643
BH640052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BM028315
BE212988
BM028520
BM028472
BM028681
CK423072
                                                                                                                                         1 tecatgagettectgagett 20
                                                                                                                                                            IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                      seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-789-758A-5
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
Query
Match Length DB
                                                                                                                                                                                                                                                                                                                          gb_est1:.*
gb_est2:.*
gb_htc::.*
gb_est4:.*
gb_est6:.*
gb_est6:.*
gb_gss1:.*
gb_gss2:.*
                                                                                                                                                                                                                                                                                                                  EST: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         992.0
992.0
992.0
992.0
992.0
992.0
887.0
887.0
                                                                          May
                                                                                                                                                                                                                                                                                                                                                            Post-processing:
                                                                                                                                                             Scoring table:
```

ö

Result

0000

요

```
trooss//y
psZGO04xGlff USDA-IFAFS:Expression of Phytophthora sojae genes
during infection and propagation_sZG Phytophthora sojae cDNA clone
agglo4616 5, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Phytophthora sojae
Phytophthora sojae
Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
Phytophthora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95.0%; Score 19; DB 8; Length 748; 100.0%; Pred. No. 6.7e+02; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1880 Pratt Dr., Blacksburg, VA 24061, USA
Tel: 540-231-7318
Email: bmtyler@vt.edu
PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. 411
/organism="Phytophthora sojae"
/mol_type="mRNA"
/db_xref="taxon:67593"
/clone="sZG004G16"
/tissue_type="Zoospore"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FORWARD: MI3 reverse 17mer at 5' end BACKWARD: MI3 reverse 17mer at 5' end Plate: 004 row: G column: 16 Seq primer: MI3 reverse 17mer at 5' en High quality sequence stop: 411.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       571 CCATGAGCTTCCTGAGCTT 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 CCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CF858979.1 GI:38113490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tyler, B. Not Published Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 411)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match
Best Local Similarity luv...
Local Similarity luv...
Local Similarity
Local Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tyler lab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yler, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CF858979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
CF858979/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                        Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, Shrantoideae, Oryzae, Oryza.

I (Dases 1 to 593)

Han, B., Peng, Q., Huang, Y.C., Ying, K., Li, Y., Guan, J.P., Zhao, Q., Hu, X., Liu, Y.L., Mu, Z.L., Liu, X.H., Lu, T.T., Zhang, Y., Lu, Y., Liu, Y.L., Lu, Y.L., Lu, Y.L., Lu, Y.L., Lu, Y.L., Zhang, Y.J., Lu, Y., Lu, Y., Li, C., Li, T., Zhang, Y., Hu, H., Jia, P.X., Zhang, L., Lun, L.P., Chen, M., Wu, S.L., Lu, X.H., Lu, T.T., Zhang, Y.J., Lu, Y., Li, C., Li, T., Zhang, Y., Hu, H., Jia, P.X., Zhang, L., Lan, L.P., Chen, W., Wu, S.A. and Xue, Y.B.

Rice cDNA EST clone
Unpublished (2003)

Contact: Han Bin
National Center for Gene Research
Chinese Academy of Sciences
SOUR Cao Bao Road, Shanghai 200233, China
Email: bhandencgr.ac.cn

Clone requests: bhandencgr.ac.cn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DT075398 11-AUG-2005
AGENCOURT 55788292 NICHD XGC FabN Xenopus laevis cDNA clone
IMAGE:8076153 5', mRNA sequence.
                                                                                                                                  CR291334 Oryza sativa library (Han B) Oryza sativa cDNA clone 2731h01p5, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Autobus, actacas, Chordata, Craniata, Vertebrata, Euteleostomi, Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae, Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae, Anopus, Aenopus.

1 (bases 1 to 748)

NIH-MGC http://mgc.nci.nih.gov/.

NIH-MGC http://mgc.nci.nih.gov/.

Ontact: Daniela S. Gerhard, Ph.D.

Contact: Daniela S. Gerhard, Ph.D.

Office of Cancer Genomics

National Cancer Institute / NIH

Bldg. 31 RmloAOT Betheada, MD 20892

Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 95.0%; Score 19; DB 7; Length 593; Best Local Similarity 100.0%; Pred. No. 6.5e+02; Matches 19; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Oryza sativa"
/mol_type="mRNA"
/mol_type="mRNA"
/b_xref="taxon:4510"
/clone="y731h0lp5"
/clone_lib="Oryza sativa library (Han B)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Xenopus laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This is rice cdna est clone
Web site: http://www.ncgr.ac.cn.
Location/Qualifiers
388 CCATGAGCTTCCTGAGCTT 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87 CCATGAGCTTCCTGAGCTT 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 CCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                    CR291334 GI:44677900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DT075398.1 GI:72374647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xenopus laevis
                                                                                                                                                                                                                                                                      Oryza sativa
Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
DT075398
LOCUS
DEFINITION
                                                                                           RESULT 2
CR291334/c
                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
```

ð

EST 31-0CT-2003

5' end

Gaps

```
þ
Tissue Procurement: Tom Sargent cDNA Library Preparation: Express Genomics cDNA Library Preparation: Express Genomics cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) MA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM17359 row: 1 column: 07
High quality sequence stop: 597.
```

```
Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
                    Phytophthora.
1 (bases 1 to 520)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 801 585 5606
Fax: 801 585 7177
                                                                                                                                   Tyler lab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AZ474937
                                                        Tyler, B.
                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AZ474937/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                    REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asamizu, E., Nakamura, Y., Sato, S. and Tabata, S.
Characteristics of the Lotus japonicus gene repertoire deduced from
large-scale expressed sequence tag (EST) analysis
Plant Mol. Biol. 54 (3), 405-414 (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yana 1532-3, Kisarazu, Chiba 292-0812, Japan
Email: asamizu@kazusa.or.jp, URL:http://www.kazusa.or.jp/en/plant/.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear EST 30-OCT-2003
                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   520 bp mRNA linear BST 30-OCT-2003 pswA014xB12f USDA-IFAFS: Expression of Phytophthora sojae genes during infection and propagation_sMA Phytophthora sojae cDNA clone BMA014B12 5, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                         EST 27-AUG-2004
                  /dev_Etage="Zoospore"
/dab host="synthetic medium"
/lab host="synthetic medium"
/clone_lib="USDA-IFAFS:Expression of Phytophthora sojae
/clone_lib="USDA-IFAFS:Expression of Phytophthora sojae
genes during infection and propagation sZG"
/note="Vector: pCMV-SPORT6.1; Site_1: Sal1; Site_2: Not1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lotus corniculatus var. japonicus
Wakaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicotyledons,
rosids, eurosids I; Pabales, Pabaceae, Papilionoideae, Loteae,
                                                                                                                                                                                                                                                                                                                                                         465 bp mRNA linear EST 27-AUG-2C BP084928 Lotus japonicus roots Lotus corniculatus var. japonicus CDNA clone MRL023h07_f 3', mRNA sequence.
BP084928 BP084928.1 GI:45641588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                Gaps
                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Lotus corniculatus var. japonicus"
/mol_type="mRNA"
/isoTate="Miyakojima MG-20"
/bo.xref="taxon:34305"
/clone="MRL023h07_f"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92.0%; Score 18.4; DB 3; Length 465; 95.0%; Pred. No. 1.2e+03; ive 0; Mismatches 1; Indels
                                                                                                                                                          Length 411;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lotus corniculatus var. japonicus (Lotus japonicus)
                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Brika Asamizu
The First Laboratory for Plant Gene Research
Kazusa DNA Research Institute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue type="roots"
/clone_lib="Lotus japonicus roots"
                                                                                                                                                      Query Match
92.0%; Score 18.4; DB 7;
Best Local Similarity 95.0%; Pred. No. 1.2e+03;
Matches 19; Conservative 0; Mismatches 1;
  cell_line="P6497"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    311 TCCATGAGCTTCCAGAGCTT 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                   1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                         64 TCCATGAGCTTCTTGAGCTT 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CF850403.1 GI:38066057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 465)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phytophthora sojae
Phytophthora sojae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15284495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cotus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 6
CF850403/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                         LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                     BP084928/c
                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    윱
```

```
Entaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Buarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Murinae; Mus.

Sciurognathi; Muroidea; Murinae; Mus.

1 (bases 1 to 568)

Dunn,D., Aoyagi,A., Barber,M., Beacorn,T., Duval,B., Hamil,C., Islam,H., Longacre,S., Mahmoud,M., Meenen,B., Pedersen,T., Islam,H., Longacre,S., Mahmoud,M., Meenen,B., Pedersen,T., Reilly,M., Rose,M., Rose,R., Stokes,R., Tingey,A., von Niederhausern,A. and Wright,D. Weiss,R. Tingey,A., von Niederhausern,A. and Wright,D. Weiss,R. Unpublished (2000)

Contact: Robert B. Weiss
University of Utah Genome Center
University of Utah

Rm. 308, Biomedical Polymers Research Bldg., 20 S. 2030 E., SLC, UT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AZ474937 S68 bp DNA linear GSS 04-OCT-2000 IM0292K09R Mouse 10kb plasmid UUGCIM library Mus musculus genomic clone UUGCIM0292K09 R, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ጛ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue type="mycelium"
/cell line="P6497"
/dev stage="mycelium"
/lab_bost="synthetic medium"
/clone lib="MSDA-IFARS:Expression of Phytophthora sojae genes during infection and propagation_SMA"
/note="Vector: pBK-CMV; Site_1: EcoR1; Site_2: Xhol"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 92.0%; Score 18.4; DB 7; Length 520; Best Local Similarity 95.0%; Pred. No. 1.2e+03; Matches 19; Conservative 0; Mismatches 1; Indels
                                                                                                                                            1880 Pratt Dr., Blacksburg, VA 24061, USA
1811: 540-231-7318
Email: bmtyler@vt.edu
PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Phytophthora sojae"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: ddunn@genetics.utah.edu
Insert Length: 10000 Std Error: 0.00
Plate: 0292 row: K column: 09
                                                                                                                                                                                                                                                                   FORWARD: BK reverse primer BACKWARD: BK reverse primer Plate: 014 row: B column: 12 Seq primer: BK reverse primer High quality sequence stop: 520.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="mRNA"
/db_xref="taxon:67593"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="sMA014B12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96 TCCATGAGCTTCTTGAGCTT 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AZ474937.1 GI:10633062
Tyler, B. Not Published
Unpublished (2003)
Contact: Tyler B
```

```
/downerson:2/11"
//clone="UVCRCS01 03011"
//tissue_type="Rind containing flavedo and albedo"
//dev_stage="Rind containing flavedo and albedo"
//dev_stage="Rind containing flavedo and albedo"
//dev_stage="Mature fruit"
//lab host="B. coli 7UC121"
//clone_lib="Washington Navel orange cold acclimated
flavedo & albedo cDNA library.
//note="Vector: Lambda Uni-2AP KR, excised phagemid;
Site_1: ECORI; Site_2: Xho1; Plants were grown in the
field at University of California, Riverside Agricultural
Operations since 1983. The scion was Washington Navel
Operations since 1983. The scion was Washington Navel
orange and the rootstock Carizzo Citrange. Tissue from
mature fruit was harvested at mid-day in January 2002
during a cold spell, when pre-dawn temperatures were
approximately -2 to 2 degree C. Approximately 2 cm median
several fruits, then wrapped in aluminum foil and frozen
guickly in dry ice. Total RNA was extracted using a phenol
extraction procedure described in Jupannaese Soc. Hort.
Sci. (1996) 64:809-814. Poly(Ah) RNA was purified, and DNA clones
were in vivo excised to give a population of pBluescript
SK(-) phagemids. All steps to this point were performed in
the TJ Close lab at the University of California,
Riverside (Fenton). Phagemids were plated, plasmid DNA
purified, cDNA clones archived, and DNA sequences
determined bi-directionally using an AB13530 at the
Arizona Genomics Institute, University of Arizona
(Collura, Peuerbacher, Kim, Kudmra, Wing, Yul).
Chromatogram files were transmitted to UC Riverside
the HarvEST pipeline (http://harvest.ucr.edu) to remove
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida; Ancylostomatoidea; Ancylostomatidae; Ancylostomatinae; Ancylostoma.

1 (bases 1 to 645)
Mitrava,M., McCarter,J.P., Pape,D., Ritter,E., Tsagareishvili,R., Ronko,I., Martin,J., Wylie,T., Dante,M., Meyer,R., Messina,D., Waterston,R.H., Clifton,S.W. and Wilson,R.
Genome Survey sequences from the parasitic nematode Ancylostoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CZ222277
AIAA-aac60f07.g1 Ancylostoma caninum whole genome shotgun library
(AIAAGSS 001) Ancylostoma caninum genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contaminants, and to trim to a high quality region. Sequences that retained a phred 17 region of at least 100 bases were deposited to GenBank."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Washington University in St. Louis
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108, USA
Tel: 314 286 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vector and cloning oligo sequences and various
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 92.0%; Score 18.4; DB 6; Best Local Similarity 95.0%; Pred. No. 1.2e+03; Matches 19; Conservative 0; Mismatches 1;
                           /cultivar="Washington navel"
/db_xref="taxon:2711"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ancylostoma caninum (dog hookworm)
Ancylostoma caninum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               196 TCCATGAGCTTCCTGGGCTT 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CZ222277.1 GI:59244415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2004)
Contact: Mitreva M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               caninum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
CZ222277/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                 /Bab.mais.
/ Jab host="E. Coli strain XL10-Gold, T1-resistant, F-"
/ clone lib="Mouse 10kb plasmid UUGCIM library"
/ clone lib="Wouse 10kb plasmid UUGCIM library"
/ note="Vector: PWD421v; Purified genomic DNA from M.
musculus G57BL/6J (male) was obtained from the Jackson
Laboratory Mouse DNA Resources (documents/dnares/). The DNA
was hydrodynamically sheared by repeated passage through a
0.005 inch orifice at constant velocity. The sheared DNA
was hydrodynamically sheared by repeated passage through a
0.005 inch orifice at constant velocity. The sheared DNA
was blunt end repaired with T4 DNA polymerase and T4
polynucleotide kinase. Adaptor oligonucleotides were
ligated to the blunt ends in high molar excess. The
adaptored DNA was purified and size-selected for a 9.5 to
10.5 kb range using preparative agarose gel
electrophoresis vector DNA was prepared from a derivative
of pWDAQ (gil #4732114 gb) AR129072.1), a copy-number
inducible derivative of plasmid R1. The vector was ligated
with adaptors complementary to the insert adaptors and
purified. The sheared, adaptored mouse DNA was annealed to
adaptored vector DNA, and transformed into
chemically-competent E. coli XL10-Gold (Stratagene) cells
and selected for ampicillin resistance."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CB291961 UNAShington Navel orange cold acclimated flavedo & albedo cDNA library Citrus sinensis cDNA clone UCRCS01_03ch11, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 584)
Close, T.J., Collura, K., Fenton, R.D., Feuerbacher, O., Kim, H.R.,
Kudrna, D., Wanamaker, S., Wing, R. and Yu, Y.
Development of EST Resources and New Genetic Markers for California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Citrus sinensis
Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons, core eudicotyledons,
rosida, eurosida II, Sapindales, Rutaceae; Citrus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Timothy Close
Department of Botany & Plant Sciences, University of California
Riverside, CA, 92521-0124
Tel: 90978743318
Fax: 909787433
Email: timothy.close@ucr.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92.0%; Score 18.4; DB 9; Length 568; 95.0%; Pred. No. 1.2e+03; ive 0; Mismatches 1; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Citrus sinensis"
Seg primer: CACACAGGAAACAGCTATGACC
Class: plasmid ends
High quality sequence stop: 568.
Location/Qualifiers
                                                                                                                                                                organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C578L/63"
                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
/clone="UUGC1M0292K09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           538 rccarcacrrccrcaccar 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CB291961
CB291961.1 GI:28617418
                                                                                                                                                                                                                                                                                                                                       /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 95.0
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Citrus sinensis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seq primer: T7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
CB291961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠ
```

Gaps

ö

Length 584; 1; Indels GSS 10-FEB-2005

```
1. .854
                                                    .661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Class: BAC ends.
    Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BH120643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
BH120643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                          FEATURES
                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (http://www.chori.org/bacpac/ordering_information.htm). This work was undertaken as part of the International Bovine BAC Mapping Consortium (IBBMC) by CSIRO Livestock Industries, Australia and the British Columbia Genome Sciences Centre, Canada.
Seq primer: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fax: 604-877-6276
Email: rholt@bcgsc.ca
Clones are derived from the bovine BAC library CHORI-240
(http://www.chori.org/bacpac/bovine240.htm). For BAC library
availability, please contact Pieter de Jong (pdejong@mail.cho.org).
Clones may be purchased from BACPAC Resources
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GSS 17-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Holt, R., Stott, J., Yang, G., Barber, S., Smailus, D., Prabhu, A.-L., Tsai, M., Cloutier, A., Lee, D., Girn, N., Olson, T., Mayo, M., Butterfield, Y., Kirkpatrick, R., Liu, J., Guin, R., Chan, A., Chiu, R., Mathewson, C., Way, N., Masson, A., Brown-John, M., Jones, S., Schein, J., Marra, M., G. Jong, P., McMilliam, S., Barris, W., Dalrymple, B.P. and Tellam, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Laurasiatheria; Cetartiodactyla; Ruminantia;
Pecora; Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661 bp DNA linear GSS 17-JUN-2
CH240 354A12.T7 CHORI-240 Bos taurus genomic clone CH240 354A12,
genomic survey sequence.
CCS:1075
                                                                                                                                                                                                                                                                                            /clone lib="Ancylostoma caninum whole genome shotgun library (AIAAGSS 001)"
/note="vector: pOTW13] Site_1: BstX1; Site_2: BstX1; Ancylostoma caninum genomic DNA was randomly sheared, end-repaired and size fractioned to enrich for 2-4 kb fragments. Genomic DNA was provided by John Hawdon (mtmint@gwumc.edu) at George Washington University. Sequencing by Washington University Genome Sequencing Center, St. Louis, NO."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequencing
The British Columbia Cancer Agency Genome Science Centre
600 W. 10th Ave, Vancouver, British Columbia, Canada V5Z 4E6
Tel: 604-877-6085
Fax: 314 286 1810
Email: nematode@watson.wustl.edu
Genomic DNA provided by John Hawdon (mtmjmh@gwumc.edu) DNA
sequenced by Washington University Genome Sequencing Center
Class: shotgun.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92.0%; Score 18.4; DB 10; Length 645; 95.0%; Pred. No. 1.2e+03; ive 0; Mismatches 1; Indels 0
                                                                                                                                                            /organism="Ancylostoma caninum"
/mol_type="genomic DNA"
/strain="Baltimore"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (2003)
Other GSSs: CH240_354A12.TARBAC13P2
Contact: Rob Holt
                                                                                                                                                                                                                               /db xref="taxon:29170"
                                                                                                                                                                                                                                                    /dev_stage="Adult"
/lab_host="GS10"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               317 TTCATGAGCTTCCTGAGCTT 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC510758 CC510758.1 GI:31829046
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 661)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 95.0'
                                                                                                                                  1. .645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bos taurus (cow)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bos taurus
                                                                                                                                            Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
CC510758/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
```

ò 셤

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSS 19-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 library availability, please contact Pieter de Jong (pdejong@mail.cho.org). Clones may be purchased from BACPAC Resources (http://www.chori.org/bacpac/orderingframe.htm). BAC end page: http://ww .tigr.org/tdb/bac_ends/mouse/bac_end_intro.html Plate: 288 row: J column: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cell_type="Spleen/Brain"
/clone_lib="RPCI-24"
/clone="Vector: pTARBACI; Site_1: BamH1; Site_2: BamH1;
RPCI-24 Mousse BAC Library produced by Pieter de Jong. The library was cloned in the pTARBACI cloning vector at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhao,S., Nierman,W., Malek,J., Shatsman,S., Akinret,B., Levins,M.,
Tsegaye,G., Geer,K., Krol,M., Shvartsbeyn,A., Gebregeorgis,B.,
Russeil,D., de Jong,P. and Fraser,C.M.
Mouse BAC End Sequences from Library RPCI-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                   /clone_11b="CHORI-240"
/note="Vector: pTARBAC1.3; Site 1: Mbol; Site 2: Mbol;
Hereford bull Li Domino 99375; CHORI-240 Bovine BAC
library (Male) produced by Pieter de Jong"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: szhao@tigr.org
Clones are derived from the mouse BAC library RPCI-24. For BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RPCI-24-288J21.TV RPCI-24 Mus musculus genomic clone RPCI-24-288J21, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1999)
Other GSSs: RPCI-24-288J21.TJ
Other GSSs: RPCI-24-288J21.TJ
Contact: Shaying Jaao
Department of Eukaryotic Genomics
The Institute for Genomic Research
712 Medical Center Dr., Rockville, MD 20850, USA
711: 301 838 0208
Pax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                              92.0%; Score 18.4; DB 9;
95.0%; Pred. No. 1.2e+03;
attive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                 /mol_type="genomic DNA"
/strain="breed: Hereford"
/db_xref="taxon:9913"
/clone="GH240_354A12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/mol_type="genomic DNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="taxon:10090"
/clone="RPCI-24-288J21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          854 bp
                                                         organism="Bos taurus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
Location/Qualifiers
                                                                                                                                                                                                                              cell_type="Blood"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             128 rccaggagcrrccrgagcrr 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BH120643.1 GI:14964155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex="Male"
                                                                                                                                                                                                      /sex="Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 854)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19; Conservative
```

```
2 CCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101 CCATGAGCTCCCTGAGCTT 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CC096512
CC096512.1 GI:29960084
GSS.
                                                                                                                                        GI:22545617
                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                        BU097976.1
                                                                                                                                                                                                                                                                                                                                                                                                                 University
                                                                                                                                                                                                                                                                                                                                                     Walbot, V.
                                                                                                                                                                                                 Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CC096512
                                                                                                                                                                                                                           Zea mays
                                                                                                                                                                     EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                        VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
CC096512/c
     3/9/6/60DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /dev stage="language of the proof of the pro
                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                    GSS 14-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maize genomic sequences found using engineered RescueMu transposon Unpublished (2001)
Contact: Walbot V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zea mays

Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Zea.
partially digested male C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                           BH640052 202 bp DNA linear GSS 14-FEB-
1008033F01.y1 1008 - RescueMu Grid I Zea mays genomic, genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 87.0%; Score 17.4; DB 9; Length 202; Best Local Similarity 94.7%; Pred. No. 3.18+03; Matches 18; Conservative 0; Mismatches 1; Indels (
                                                                                                               Length 854;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Zea mays"
/mol_type="genomic DNA"
/doltivar=mixed background W23/A188/B73"
/db xref="taxon:4577"
/tissue_type="leaf"
                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Department of Biological Sciences
Stanford University
855 California Ave, Palo Alto, CA 94304, USA
Tel: 650 723 2227
Fax: 650 725 8221
Email: walboteeranford.edu
Plate: 1008033 row: 34
Class: transposon-tagged.
                                                                                                            Query Match 92.0%; Score 18.4; DB 9; Best Local Similarity 95.0%; Pred. No. 1.3e+03; Matches 19; Conservative 0; Mismatches 1;
  BamH1 sites using MboI
DNA."
                                                                                                                                                                                                                                                  835 TCCATGAGCTTTCTGAGCTT 854
                                                                                                                                                                                                                        1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145 CCATGAGCTCCCTGAGCTT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BH640052.1 GI:18665976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 CCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Walbot, V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zea maya
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                          BH640052/c
                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                              RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                        ORIGIN
                                                                                                                                                                                                                                                                           윱
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
```

RESULT 13

```
298 bp mRNA linear EST 29-AUG-2002 94612205.y1 946 - tassel primordium prepared by Schmidt lab Zea BU097976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Organ: tassels; Vector: HybrizAP; Site_1: BcoRI; Site_2: XhoI; George Chuck dissected immature tassels between 1mm and 3mm. Sharon Stanfield prepared the cDNA library in HybrizAP. Sample insert size range was 350 bp to 3 Kb with a 1 Kb average."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GSS 16-APR-2003
                                                                                                                                                                                                                                                                           Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
                                                                                                                                                                                                                                                                                                   Spermatophyta; Magnoliophyta; Lillopaida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.
1 (bases 1 to 298)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /dev_stage="just after the transition from vegetative to inflorescence development"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="946 - tassel primordium prepared by Schmidt
lab"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Nematocera; Culicoidea; Culicidae; Stegomyia.

Loftus, B., Shetty, J., Severson, D., Brown, S. and Knudson, D. End sequencing of Aedes aegypti BACs Unpublished (2003)
Cuther GSSs: CSU-K34.113F11.SP6
Contact: Brendan Loftus
Department of Eukaryotic Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                       Maize ESTs from various cDNA libraries sequenced at Stanford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CSU-K34.113F11.17 CSU-K34 Aedes aegypti genomic clone
CSU-K34.113F11, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87.0%; Score 17.4; DB 5; Length 298; 94.7%; Pred. No. 3.2e+03; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contract: Walbot V
Department of Biological Sciences
Stanford University
855 California Ave, Palo Alto, CA 94304, USA
Tel: 650 723 227
Fax: 650 725 8221
Email: walbot@stanford.edu
Plate: 946122 row: G column: 05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aedes aegypti (yellow fever mosquito)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       316 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         db xref="taxon:4577"
/tissue_type="tassels"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Zea mays"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lab host="XLOLR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/cultivar="OH43"
```

```
DE127737 367 bp DNA linear GSS 02-AUG-2005 Oryzias latipes DNA, reverse end of BAC clone: Md0178K15, genomic Burvey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
TIGR Medical Center Drive, Rockville, MD 20850, USA Tel: 301-838-3543
Fax: 301-838-0208
Email: ente@tigr.org
Library was provided by Susan Brown and Dennis Knudson at Colorado State University.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note=__rac__color. And the payors of payors o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oryzias latipes the Marania Craniata; Vertebrata; Buteleostomi; Butarota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei; Acanthomorpha; Acanthomorpha; Acanthomorpha; Acanthomorpha; Adrianichthyidae; Oryzinae; Oryzias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (30-JUN-2005) Nobuyoshi Shimizu, Keio University, School of Medicine, Molecular Biology; 35 Shinanomachi, Shinjuku-ku, Tokyo, 160-8582, Japan (E-mail:nshimizu@dmb.med.keio.ac.jp, Tel:81-3-3351-2370, Fax:81-3-3351-2370)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Oryzias latipes"
/mol_type="genomic DNA"
/db_xref="taxon:8090"
/clone="Md0178K15"
/clone lib="Medaka HdrR BAC library"
/note="This sequence is reverse end of BAC clone Md0178K15."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match

87.0%; Score 17.4; DB 11; Length 367;
Best Local Similarity 94.7%; Pred. No. 3.3e+03;
Matches 18; Conservative 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match

87.0%; Score 17.4; DB 9; Length 316;
Best Local Similarity 94.7%; Pred. No. 3.3e+03;
Matches 18; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shimizu, N., Asakawa, S., Shimizu, A. and Sasaki, T. The BAC end sequence of Oryzias latipes Published Only in Database (2005)
2 (bases I to 367)
Shimizu, N., Asakwa, S., Sasaki, T. and Shimizu, A. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Aedes aegypti"
/mol_type="genomic DNA"
/db_xref="taxon:7159"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oryzias latipes (Japanese medaka)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="CSU-K34.113F11"
/clone lib="CSU-K34"
                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
1. .316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 CCATGAGCTTCCTGAGCTT 20
||| |||||||||||||
102 CCAGGAGCTTCCTGAGCTT 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DE127737.1 GI:71622482
GSS.
                                                                                                                                                                                                                                                                                                     Seq primer: T7 Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
DE127737/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
```

Search completed: May 4, 2006, 07:17:35 Job time: 1422.59 secs

This Page Blank (uspto)

```
US-08-738-652-8

Sequence 8, Application US/08738652B

Sequence 8, Application US/08738652B

Sequence 8, Application US/08738652B

SEQUENCE 10: A PAPLICATION:

APPLICANT: Krieg, Arthur M.

TITLE OF INFORMATION: Immunostimulatory Nucleic Acid Molecules

TILE REFERENCE: C1039/7004 HCL

CURRENT APPLICATION NUMBER: US/08/738,652B

CURRENT FILING DATE: 1996-10-30

EARLIER APPLICATION NUMBER: US 08/276,358

SEALIER PILING DATE: 1994-07-15

EARLIER APPLICATION NUMBER: US 08/386,063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 18; Conserv
888822.0
8872.0
9888822.0
9888822.0
9888800.0
988800.0
988800.0
988800.0
988800.0
988800.0
988800.0
988800.0
988800.0
988800.0
                                                                                                                                                                                                                                                                                                                                       US-09-949-016-17132/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; ORGANISM: Human
US-09-949-016-17132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 17132
LENGTH: 37335
 TYPE: DNA ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 8, Appli
Sequence 98, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 6213, Appli
Sequence 6218, Appli
Sequence 6218, Appli
Sequence 121, Appli
Sequence 121, Appli
Sequence 15816, Appli
Sequence 15816, Appli
Sequence 148267, Sequence 148267, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 17132, A
Sequence 8, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 58, Appl
Sequence 103, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 532, Ap
Sequence 14387,
Sequence 12235,
                                                                                4, 2006, 03:52:26; Search time 42.2989 Seconds (without alignments) 840.478 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 15904,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
            5.1.7
Biocceleration Ltd
                                                                                                                                                                                                                                                                                                                                                           Issued Patents NA:*

(cgn2_6/ptodata/1/ina/1_COMB.seq:*

(cgn2_6/ptodata/1/ina/5_COMB.seq:*

(cgn2_6/ptodata/1/ina/6A_COMB.seq:*

(cgn2_6/ptodata/1/ina/6B_COMB.seq:*

(cgn2_6/ptodata/1/ina/H_COMB.seq:*

(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

(cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

(cgn2_6/ptodata/1/ina/RE_COMB.seq:*

(cgn2_6/ptodata/1/ina/RE_COMB.seq:*

(cgn2_6/ptodata/1/ina/RE_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -09-949-016-14387
-09-949-016-12235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-949-016-15904
US-09-949-016-15904
                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                        1303057 segs, 888780828 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
           GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                           - nucleic search, using sw model
                                                                                                                                                             tccatgagcttcctgagctt 20
                                                                                                                                                                                    IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                          length: 0
length: 2000000000
                                                                                                                             US-10-789-758A-5
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           519
1131
1536
2077
4494
45587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             719
4113
23174
23187
42894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          42898
                                                                                                                                                                                                                                                                      Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
                                                                                                                                                                                    Scoring table:
                                                           OM nucleic
                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                    Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Result
```

```
Sequence 17132, Application US/09949016

Sequence 17132, Application US/09949016

Patent No. 6812339

GENERAL INFORMATION:

APPLICANT: VENTER, J. Craig et al.

TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF;

FILE REPERENCE: CLOO1307

CURRENT APPLICATION NUMBER: US/09/949,016

CURRENT FILING DATE: 2000-04-14

PRIOR FILING DATE: 2000-10-20

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-10-03

PRIOR FILING DATE: 2000-00-08

NUMBER OF SEQ ID NOS: 207012

SOFFWARE: FRESEER OF Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                         Sequence 17572, A Sequence 70, Appl Sequence 70, Appl Sequence 85, Appl Sequence 3, Appli Sequence 9582, Appli Sequence 9582, Appli Sequence 661, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 5265, Ap
Sequence 53, Appl
Sequence 113758,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 613, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 737, App
Sequence 760, App
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 114094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Sequence
Sequence
                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 37335;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
US-10-427-923-3

US-09-949-016-114324

US-09-949-016-114324

US-09-082-649B-70

US-09-082-649B-70

US-09-085-101-70

US-09-955-101-70

US-09-955-3

US-09-955-3

US-09-91-3

US-09-91-3

US-09-91-016-11344

US-09-949-016-11344

US-09-949-016-11317

US-09-949-016-11317

US-09-949-016-113758

US-09-949-016-113758

US-09-949-016-113758

US-09-949-016-113758

US-09-949-016-113758

US-09-949-016-113758

US-09-949-016-113758

US-09-949-016-113758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 17.4; DB 3;
Pred. No. 1.3e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29042 ccarcacrrrccrcacrr 29024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 CCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18; Conservative
      1005413
1122119
1122119
1131262
1131262
20
20
20
20
4111
223111
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22311
22
```

Gaps

ö

셤

ઠે

```
Sequence 8 Application US/08960774

Fatent No. 623916

GENERAL INFORMATION:
APPLICANT: KILD
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
NUMBER OF SEQUENCES: 111
CORRESPONDENCE ADDRESS: 120
ADDRESSEE: Fish & Richardson P.C.
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: ASISTEM FC-DOS/MS-DOS
SOFTWARE: ASISTEM FC-DOS/MS-DOS
SOFTWARE: ASISTEM FC-DOS/MS-DOS
APPLICATION DATA:
APPLICATION NUMBER: US/08/960,774
FILING DATE: 30-October-1997
CLASSIFICATION DATA:
APPLICATION NUMBER: U.S. Serial No. 6239116 08/738,652
FILING DATE: October 30, 1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Haile, Lisa A.
REGISTRATION NUMBER: 38,347
REGISTRATION NUMBER: 08918/012001
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 17; DB 3; Length 20; Pred. No. 76;
                                                                                                                                                                                   Query Match 85.0%; Score 17; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 76; Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                           FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-09-286-098-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-191-170-98
; Sequence 98, Application US/09191170
; Patent No. 6429199
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85.0%; Sc.
100.0%; Pre
                                                                                                                                                                                                                                                                                                                       1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                               1 TCCATGAGCTTCCTGAG 17
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 619/678-5099
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 20 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-960-774-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 5
US-08-960-774-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 103, Application US/09286098
| Patent No. 6218371
| GENERAL INFORMATION |
| GENERAL INFORMATION |
| APPLICANT: Krieg, Arthur M. |
| APPLICANT: Weiner, George |
| TITLE OF INVENTION: Methods and Products for Stimulating the |
| TITLE OF INVENTION: Methods and Products for Stimulating the |
| TITLE OF INVENTION: Methods |
| TITLE OF INVENTION: Cyclokines |

                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schwartz, David A.
TITLE OF INVENTION: USE OF NUCLEIC ACIDS CONTAINING
TITLE OF INVENTION: UNSETHYLATED CGG DINUCLEOTIDE IN THE TREATMENT OF TITLE OF INVENTION: LDS-ASSOCIATED DISORDERS
FILE REFERENCE: Cl039/7011
CURRENT APPLICATION NUMBER: US/09/030, 701B
CURRENT PEPLICATION NUMBER: 60/039, 405
PRIOR PILING DATE: 1997-02-28
NUMBER OF SEQ ID NOS: 65
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 58
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 3; Length 20; 76;
                                                                                                                                                                                                                                                                                                                                                     DB 3; Length 20; 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                 , OTHER INPORMATION: Synthetic oligonucleotide US-08-738-652-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                     Query Match 85.0%; Score 17; DB Best Local Similarity 100.0%; Pred. No. 76, Matches 17; Conservative 0; Mismatches
EARLIER FILING DATE: 1995-02-07
NUMBER OF SEQ ID NOS: 55
SOFTHARE: PastSEQ for Windows Version 3.0
SEQ ID NO 8
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85.0%; Score 17; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 58, Application US/09030701B Patent No. 6214806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 rccardactrccrdad 17
                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 100.0
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-286-098-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
US-09-030-701-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-030-701-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
```

ઠે

ö

Gaps

```
USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ฮ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-960-774-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 11
LENGTH: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunostimulatory Nucleic Cells
TITLE OF INVENTION: Era Activating Dendritic Cells
FILE REFERENCE: C1039/7017
CURRENT PAPLICATION NUMBER: US 08/960,774
EARLIER APPLICATION NUMBER: US 08/738,652
EARLIER PILING DATE: 1997-10-30
EARLIER PILING DATE: 1995-10-30
EARLIER PILING DATE: 1995-10-30
EARLIER PILING DATE: 1995-02-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 85.0%; Score 17; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 76; Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85.0%; Score 17; DB 3; Length 20; 100.0%; Pred. No. 76; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INTORNATION:
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Methods of Treating Cancer Using
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
FILE REFERENCE: C1039/7021/HCL
CURRENT PEDLICATION NUMBER: US/09/337,619
CURRENT PELLING DATE: 1999-06-21
EARLIER FILING DATE: 1997-10-30
EARLIER FILING DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/36,063
EARLIER FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PSELSEQ for Windows Version 3.0
SEQ ID NO 8
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:

COTHER INFORMATION: synthetic oligonucleotide
US-09-191-170-98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Synthetic Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 8, Application US/09337619
; Patent No. 6653292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 rccarcaccrrccrcag 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-337-619-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-337-619-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

RESULT

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 11. Application US/08960774

Patent No. 623916

GENERAL INFORMATION:
APPLICANT: Krieg et al.,
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
NUMBER OF SEQUENCES: 111
CORRESPONDENCES: 128 K Richardson P.C.
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ACTI text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/960,774
FILING DATE: 30-October-1997
CLASSIFICATION DATA:
APPLICATION NUMBER: U.S. Serial No. 6239116 08/738,652
FILING DATE: October 30, 1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Haile, Lies A.
REGISTRATION NUMBER: 38,347
                                                                  APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPERENCE: Clo3y7004 HCL
CURRENT APPLICATION NUMBER: US/08/738,652B
CURRENT FILING DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER FILING DATE: 1994-07-15
EARLIER FILING DATE: 1995-02-07
NUMBER OF SEQ ID NOS: 55
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 85.0%; Score 17; DB 3; Best Local Similarity 100.0%; Pred. No. 77; Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ) OTHER INFORMATION: Synthetic oligonucleotide US-08-738-652-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08918/012001
Sequence 11, Application US/08738652B
Patent No. 6207646
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 05
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619/678-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 619/678-5099
INFORMATION FOR SEQ ID NO: 11:
                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 21 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
```

0;

Gaps

```
Sequence 6218, Application US/09252991A

Sequence 6218, Application US/09252991A

Patent No. 6551795

GENERAL INFORMATION:
TITLE OF INVENTION:
TIT
                                                                                                                                                                                                                                                                                                                                                                                      PACENTAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS TITLE OF INVENTION: ARCHGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR PELING DATE: 1998-02-18
PRIOR PELING DATE: 1998-02-18
PRIOR PELING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 6329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 1131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1536;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 16.8; DB 3; Length 1
Pred. No. 1.6e+02;
0; Mismatches 2; Indels
                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 84.0%; Score 16.8; DB 3; 90.0%; Pred. No. 1.6e+02;
Best Local Similarity 90.0%; Pred. No. 1.4e+02; Matches 18; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                       Sequence 6329, Application US/09252991A Patent No. 6551795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 1221, Application US/10104047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1086 TCCATGAGCTTCATGAACTT 1067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                  50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGAGCTTCATGAACTT 20
                                                                                                                                                             50 rccardadcrrcardaacrr 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 84.0%;
Best Local Similarity 90.0%;
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
US-09-252-991A-6218/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
US-10-104-047-1221/c
                                                                                                                                                                                                                                                                                                      US-09-252-991A-6329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-252-991A-6329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-252-991A-6218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                  ò
                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6243, Application US/09252991A

Patent No. 6551795

GENERAL INFORMATION:

PAPLICANT: Marc J. Rubenfield et al.

TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

FILE REPRESENTE: 1099-02-18

CURRENT APPLICATION NUMBER: US 60/074,788

PRIOR PILING DATE: 1999-02-18

PRIOR FILING DATE: 1998-02-18

PRIOR FILING DATE: 1998-02-18

PRIOR FILING DATE: 1998-07-27

NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 6243
                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 3; Length 519;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11. Application US/09337619
Fatent NO. 6653292
GENERAL INFORMATION:
TITLE OF INVENTION: Methods of Treating Cancer Using
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
FILE REFERENCE: C1039/7021/HCL
CURRENT FAPLICATION NUMBER: US/09/337,619
CURRENT FILING DATE: 1999-06-21
EARLIER APPLICATION NUMBER: US 08/960,774
EARLIER APPLICATION NUMBER: US 08/738,652
EARLIER PILING DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 21
                                                                                                  DB 3; Length 21; 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
85.0%; Score 17; DB 3;
Best Local Similarity 100.0%; Pred. No. 77;
Matches 17; Conservative 0; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , OTHER INFORMATION: Synthetic Oligonucleotide US-09-337-619-11
                                                                                              Query Match
Best Local Similarity 100.0%; Pred. No. 77,
Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      84.0%; Score 16.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                          1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                      1 rccarcacerrccraag 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
   , MOLECULE TYPE: CDNA
US-08-960-774-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
US-09-252-991A-6243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-252-991A-6243
                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
US-09-337-619-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

ö

Gaps

ö

Gaps

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                    ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 55, Application US/09566921

Fatent No. 6682888
GENERAL INFORMATION:
APPLICANT: Loring, Jeanne F.
APPLICANT: Edwards, Carla M.
TILLO F INVENTION: GENES EXPRESSED IN ALZHEIMER'S DISEASE
FILE REFERENCE: PA-0024 US
CURRENT APPLICATION NUMBER: US/09/566,921
CURRENT FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 138
SOFTWARE: PERL PROGRAM
SEQ ID NO 55
LENGHARE: A494
                                                                                                                                                                                                                                                                                                                                                                       Query Match 84.0%; Score 16.8; DB 3; Length 2077; Best Local Similarity 90.0%; Pred. No. 1.7e+02; Matches 18; Conservative 0; Mismatches 2; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 84.0%; Score 16.8; DB 3; Length 4494; Best Local Similarity 90.0%; Pred. No. 1.9e+02; Matches 18; Conservative 0; Mismatches 2; Indels 0
GENERAL INFORMATION:
APPLICAMT: HELIX RESEARCH INSTITUTE
TITLE OF INTERNATION:
FILE REPERENCE: H1-A010S
CURRENT APPLICATION NUMBER: US/10/104,047
CURRENT PILING DATE: 2002-03-25
PRIOR PILING DATE: 2002-03-25
NUMBER OF SEQ ID NOS: 4096
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 1221
LENGTH: 2077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; NAME/KEY: misc feature
; OTHER INFORMATION: Incyte ID No. 6682888 024844.5
US-09-566-921-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     428 rechrenciecrecerent 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                  TYPE: DNA
CORGANISM: Homo sapiens
US-10-104-047-1221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-566-921-55/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
```

Search completed: May 4, 2006, 07:23:49 Job time : 44.2989 secs

1486 TCCATGAGCTTCTGGAGCTT 1467

g

This Page Blank (uspto)

```
Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-768-012-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 2
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        887, App
5, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12, Appl
17537, A
40847, A
                                                                                                                                                    4, 2006, 07:24:16; Search time 298.851 Seconds
(without alignments)
553.412 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Published Applications NA Main:*

1: /cgn2_6/ptodata/1/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/1/pubpna/US08_PUBCOMB.seq:*
3: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
4: /cgn2_6/ptodata/1/pubpna/US09B_PUBCOMB.seq:*
5: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
6: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
7: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
8: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
9: /cgn2_6/ptodata/1/pubpna/US10B_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19587084
5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-776-479-887
US-09-776-479-887
US-10-112-653-88
US-10-314-578-887
US-10-314-578-887
US-10-317-8887
US-10-317-8887
US-10-317-883-12
US-10-317-883-12
US-10-317-883-12
US-10-317-953-40847
US-09-888-326-574
US-09-888-326-574
US-09-888-326-575
US-09-888-326-575
US-09-888-326-575
US-09-888-326-575
US-09-776-479-27
US-09-776-479-27
US-09-776-479-27
US-09-776-479-27
US-09-776-479-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                9793542 seqs, 4134689005 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
  GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                     nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                 1 tccatgagcttcctgagctt 20
                                                                                                                                                                                                                                                                                                                                                                   IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0
seq length: 200000000
                                                                                                                                                                                                                                                     US-10-789-758A-5
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
10
                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                     OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database :
                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Result
```

```
92, Appl
200, App
27, Appl
193, Appl
27, Appl
27, Appl
27, Appl
92, Appl
871, Appl
871
                                                                                                                                                                                                                                                                                       Appli
Appli
Appli
Appli
Appli
                                                                                                  Sequence
Sequence
Sequence
                                                                                                                                                 Sequence Sequence Sequence S
                                                                                                                                                                                                                   Sequence
Sequence
Sequence
Sequence
                    Sequence
Sequence
                                                                                                                                                                                                                                                                                       Sequence
                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                      Sequence
US-09-776-479-92

US-09-776-479-200

US-09-776-479-200

US-10-112-653-27

US-10-112-653-193

US-10-112-653-193

US-10-112-653-193

US-10-017-995-27

US-10-017-995-27

US-10-017-995-87

US-10-118-229-98

US-10-118-229-98

US-10-118-258-98

US-10-118-258-92

US-10-314-578-92

US-10-314-578-92

US-10-314-578-92

US-10-314-578-92

US-10-314-578-92

US-10-119-493-8

US-10-627-331-8

US-10-627-331-8

US-10-627-331-8

US-10-627-331-8

US-10-627-331-8

US-10-627-331-8

US-10-627-331-8

US-10-627-331-8
```

ALIGNMENTS

ö

Gaps

Gaps

. 0

```
Sequence 858, Application US/10112653
; Sequence 858, Application US/200306268A1
; Publication No. US2003065268A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Barg, Daniel J.
; TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR
; TITLE OF INVENTION: TREATMENT OF NON-ALLERGIC INFLAMMATORY DISEASES
; TITLE REFERENCE: C01039/70060 (AWS)
; CURRENT APPLICATION NUMBER: US 60/1012,653
; CURRENT FILING DATE: 2002-03-29
; PRIOR FILING DATE: 2001-03-29
; NUMBER OF SEQ ID NOS: 10400
; SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 887, Application US/10017995
; Sequence 887, Application US/10017995
; Publication No. US20030055014A1
; GENERAL INFORMATION:
    APPLICANT Bratalar, Robert L.
    TITLE OF INVENTION: Inhibition of Angiogenesis by Nucleic Acids
    TITLE OF INVENTION: Inhibition of Angiogenesis by Nucleic Acids
    TITLE OF INVENTION: Inhibition of Angiogenesis by Nucleic Acids
    CURRENT APPLICATION NUMBER: US/10/017,995
    CURRENT FILING DATE: 2001-12-18
    NUMBER OF SEQ ID NOS: 1093
    SOFTWARE: FastSEQ for Windows Version 3.0
    SEQ ID NO 887
    LENGTH: 20
                                                                                                                                                                                                                                                                   Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0%; Score 20; DB 5; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) OTHER INFORMATION: Synthetic Oligonucleotide US-10-112-653-858
SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 887 LENGTH: 20
                                                                                                                                                                                ) OTHER INFORMATION: Synthetic Sequence US-09-776-479-887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                1 rccargagcrrccrgagcrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
                                                                                               TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-017-995-887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-112-653-858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 858
LENGTH: 20
                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 887, Application US/09776479

Sequence 887, Application US/09776479

Publication No. US2030887848A1

GENERAL INFORMATION:

APPLICANT: Brataler, Robert L.

APPLICANT: Bretaler, Robert L.

APPLICANT: Petersen, Deanna M.

TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION NUMBER: US/09/776,479

CURRENT APPLICATION NUMBER: US/09/776,479

CURRENT FILING DATE: 2001-02-03

NUMBER OF SEQ ID NOS: 1093

SOFTWARE: FastSEQ for Windows Version 3.0

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 887, Application US/09776479
; Sequence 887, Application US/09776479
; Publication No. US20040067902A9
; GENERAL INFORMATION:
; APPLICANT: Brataler. Robert L.
APPLICANT: Petersen, Deanna M.
; APPLICANT: Petersen, Deanna M.
; TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the
; TITLE OF INVENTION: Treatment of Asthma and Allergy
; FILE REPERBENCE: C1037/7013 (HCL/MAT)
; CURRENT APPLICATION NUMBER: US/09/776,479
; CURRENT FILING DATE: 2001-02-02
; PRIOR FILING DATE: 2000-02-03
; NUMBER OF SEQ ID NOS: 1093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 5.6; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                             OTHER INFORMATION: Synthetic oligonucleotide, NAME/KEY: misc_feature, LOCATION: (0)...(0), LOCATION: (0)...(0), OTHER INFORMATION: phosphorothicate backbone US-09-888-126-573
                                        NUMBER OF SEQ ID NOS: 848
SOFTWARE: PsetSEQ for Windows Version 3.0
SOFTWARE: PsetSEQ for Windows Version 3.0
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) OTHER INFORMATION: Synthetic Sequence US-09-776-479-887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                TYPE: DNA
ORGANISM: Artificial Sequence
            PRIOR FILING DATE: 2000-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-776-479-887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 3
US-09-776-479-887
```

ઠે 셤 ô

Gaps

ö

; OTHER INFORMATION: Synthetic Sequence US-10-017-995-887

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Lex M. Cowsert
APPLICANT: Lex M. Cowsert
APPLICANT: Kenneth W. Dobie
TITLE REFERENCE: RTS-0438
CURRENT APPLICATION NUMBER: US/10/317,883A
CURRENT FILING DATE: 2002-12-11
NUMBER: OF SEQ ID NOS: 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 100.0%; Score 20; DB 8; Length 20; Best Local Similarity 100.0%; Pred. No. 5.6; Matches 20; Conservative 0; Mismatches 0; Indels
     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Oligonucleotide containing a GpC motif
US-10-789-758-5
       ö
     0; Mismatches
                                                                                                                                                                                                                 Sequence 5. Application US/10789758
Publication No. US20050002958A1
GENERAL INFORMATION:
APPLICANT: Cohen, Joe
APPLICANT: Garcon, Nathalie
APPLICANT: Garcon, Nathalie
APPLICANT: Woss, Garald
TITLE OF INVENTION: Vaccine
FILE REFERENCE: B45187
CURRENT APPLICATION NUMBER: US/10/189,758
CURRENT PILING DATE: 2004-02-27
PRIOR APPLICATION NUMBER: PCT/EP00/05841
PRIOR APPLICATION NUMBER: PCT/EP00/05841
PRIOR FILING DATE: 2002-03-07
PRIOR FILING DATE: 2002-03-07
PRIOR FILING DATE: 1999-06-23
PRIOR FILING DATE: 1999-06-29
NUMBER OF SEQ ID NOS: 7
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12, Application US/10317883A Publication No. US20040115641A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc feature
LOCATION: 31186-31258
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: 39183
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DITHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 rccardadcrrccrdadcrr 20
                                                                                     1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Artificial Sequence
     20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature
LOCATION: 39181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc_feature
LOCATION: 39183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
ORGANISM: H. sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 312477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-317-883A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                               유
                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 887, Application US/10831778

Sequence 887, Application US/10831778

Bublication No. US2000235774A1

GENERAL INFORMATION:

APPLICANT: Brataler, Robert L.

APPLICANT: Bretaler, Vee

ITILE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION: Immunostimulatory Nucleic Acids for the TITLE OF INVENTION UNMER: US/10/831,778

CURRENT APPLICATION NUMBER: US/10/831,778

CURRENT APPLICATION NUMBER: US/01/93

PRIOR FILING DATE: 2000-02-03

PRIOR FILING DATE: 2000-02-03

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 887

LENGTH: 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
Query Match 100.0%; Score 20; DB 5; Length 20; Best Local Similarity 100.0%; Pred. No. 5.6; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20; DB 8; Length 20; Pred. No. 5.6;
                                                                                                                                                                                                                                                       Sequence 887, Application US/10314578

Publication No. US20030212026A1

GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

APPLICANT: Schetter, Christian

APPLICANT: Vollmer, Jorg

TITLE OF INVENTION: Immunostimulatory Nucleic Acids

FILE REFERENCE: C1039/7035 (HCL/MAT)

CURRENT APPLICATION NUMBER: US/10/314,578

CURRENT FILING DATE: 2002-12-09

PRIOR PILING DATE: 1999-09-25

PRIOR PILING DATE: 1999-09-25

PRIOR FILING DATE: 1999-09-27

PRIOR FILING DATE: 2000-08-23

NUMBER OF SEQ ID NOS: 1145

SOFTWARE: PastSEQ for Windows Version 3.0

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; FEATURE:
; OTHER INFORMATION: Synthetic Sequence
US-10-831-778-887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , OTHER INFORMATION: Synthetic Sequence US-10-314-578-887
                                                                                                    1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                   1 rccarcaccrrccrcaccrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                  -10-314-578-887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                    ઠ
                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

```
NAME/KEY: misc_feature
LOCATION: 135150-135259
OTHER: n = A,T,C or G
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc feature
LOCATION: 79644-79743
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc_feature
LOCATION: 102609-102708
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc feature
LOCATION: 106849-106948
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature
LOCATION: 117089-117188
OTHER INFORMATION: n = A,T,C or G
PEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_feature
LOCATION: 126722-126721
OTHER INFORMATION: n = A,T,C or G
NAME/KEY: misc feature
LOCATION: 39464-39563
OTHER INPORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                     FEATURE:
NAME/KEY: misc_feature
LOCATION: 56710-56809
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc feature
LOCATION: 86851-86950
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY: misc feature
LOCATION: 65039-65138
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: n = A,T,C or G
                                                                                     NAME/KEY: misc feature
LOCATION: 51426-51525
OTHER INFORMATION: n = A,T,C or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc feature
LOCATION: 121444-121543
OTHER INFORMATION: n = A,T,C or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc_feature
LOCATION: 113142-113241
DTHER INFORMATION: n = A,T,C or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_feature
LOCATION: 130441-130541
OTHER INFORMATION: n = A,T,C or
                                                                                                                                                                                                                                  DITHER INFORMATION: n = A, I, C or
                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc feature
LOCATION: 73415-73514
OTHER INFORMATION: n = A,T,C or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
LOCATION: 97243-97342
OTHER INFORMATION: n = A,T,C or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc feature
LOCATION: 92371-92470
                                                                                                                                                                                     NAME/KEY: misc_feature
LOCATION: 56648
```

NAME/KEY: misc_feature

NAME/KEY: misc_feature LOCATION: 243193-243292 OTHER INFORMATION: n = A,T,C or G NAME KEY: misc feature LOCATION: 263803-263902 OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc feature LOCATION: 266546-266645 OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc_feature LOCATION: 267821-267920 OTHER INFORMATION: n = A,T,C or G FRATURE: NAME/KEY: misc feature LOCATION: 275949-276048 OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc_feature LOCATION: 138860-138959 OTHER INFORMATION: n = A,T,C or G FEATURE: NAME/KEY: misc feature LOCATION: 146475-146574 OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc feature LOCATION: 193431-193530 OTHER INFORMATION: n = A,T,C or G FEATURE:
NAME/KEY: misc_feature
LOCATION: 245887-245986
OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc feature LOCATION: 141856-141955 OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc feature LOCATION: 144205-144304 OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc feature LOCATION: 147608-147707 OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc feature LOCATION: 149158-149257 JTHER INFORMATION: n = A,T,C or G NAME/KEY: misc_feature LOCATION: 160337-160436 OTHER INFORMATION: n = A,T,C or G NAME/KEY: misc feature LOCATION: 227963-228062 OTHER INFORMATION: n = A,T,C or G DIHER INFORMATION: n = A, T, C or G OTHER INFORMATION: n = A, T, C or G LOCATION: 135692 OTHER INFORMATION: n = A,T,C or FEATURE: NAME/KEY: misc feature LOCATION: 280464 NAME/KEY: misc feature LOCATION: 227937 NAME/KEY: misc feature LOCATION: 204369

```
Sequence 40847/c

Sequence 40847, Application US/10437963

Sequence 40847, Application US/10437963

Sequence 40847, Application No. US20040123343A1

Sequence 40847, Application No. US20040123343A1

Septicant invocatic, David K.

APPLICANT: La Rosa, Thomas J.

APPLICANT: Cao, Yongwei

APPLICANT: Cao, Yongwei

APPLICANT: Barbazuk, Bard

APPLICANT: Barbazuk, Brad

APPLICANT: Li Ping

APPLICANT: Li Ping

APPLICANT: Li Ping

APPLICANT: MVENTION: Plants and Uses Thereof for Plant Improvement

FILE REFERENCE: 38-21(53221)

CURRENT APPLICATION NUMBER: US/10/437,963

CURRENT APPLICATION NUMBER: US/10/437,963

CURRENT FILING DATE: 2003-05-14

SEQ ID NO 40847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1939, Application US/10739930

Fublication No. US20040216190A1

GENERAL INFORMATION:
APPLICANT: KOVALIC,
TILLE OF INVENTION:
TITLE OF INVENTION WIGHER AND USES THEREOF FOR PLANT IMPROVEMENT
FILE REFERENCE: 38-21(53377)B

CURRENT APPLICANTION NUMBER: US/10/739,930

CURRENT APPLICANTION NUMBER: US/10/739,930

CURRENT APPLICANTION NUMBER: US/10/739,930

SEQ ID NOS: 11088

SEQ ID NO 1939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 2394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , OTHER INFORMATION: Clone ID: ZEAMA-23APR03-CLUSTER16551_3
US-10-739-930-1939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 87.0%; Score 17.4; DB 8; Best Local Similarity 94.7%; Pred. No. 1.4e+02; Matches 18; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Clone ID: PAT_MRT4530_44249C.1
US-10-437-963-40847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 17.4; DB 7;
Pred. No. 1.4e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: (1)..(2394)
OTHER INFORMATION: unsure at all n locations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 103, Application US/09824468 ; Patent No. US20020064515A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     312 CCATGAGCTCCCTGAGCTT 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 CCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    103 CCATGAGCTCCCTGAGCTT 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 CCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87.0%;
94.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 94.7
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Oryza sativa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-739-930-1939/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: unsure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-824-468-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 2616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17537, Application US/10424599
Publication No. US20040031072A1
GENERAL INFORMATION:
APPLICANT: La Rosa Thomas J
APPLICANT: AROUNT STOUNT STO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 92.0%; Score 18.4; DB 7; Length 312477; Best Local Similarity 95.0%; Pred. No. 58; Matches 19; Conservative 0; Mismatches 1; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 87.0%; Score 17.4; DB 7; Length 694; Best Local Similarity 90.0%; Pred. No. 1.3e+02; Matches 18; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Clone ID: PAT_MRT3847_115840C.1
US-10-424-599-17537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: (1)..(694)
OTHER INFORMATION: unsure at all n locations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         184253 rccarcacrrccrcarcrr 184272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           367 rccardagcrrgcngagcrr 386
                                                                                                                                                                                                                                      LOCATION: 281830
OTHER INFORMATION: n = A,T,C or G
PEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: 2820\overline{3}2
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: 282024
OTHER INFORMATION: n = A,T,C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGAGCTTCCTGAGCTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGAGCTTCCTGAGCTT 20
INFORMATION: n = A, T, C or G
                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: n = A, T, C or G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: n = A, T, C or G
                                                                                                                                              ö
                                                              NAME/KEY: misc feature
LOCATION: 280587
OTHER INFORMATION: n = A,T,C
                                                                                                                                                                                                         NAME/KEY: misc feature LOCATION: 281830
                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc feature
LOCATION: 281920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: misc feature
LOCATION: 281923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc feature
LOCATION: 282024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc feature
LOCATION: 282032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: unsure
LOCATION: (1)..(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -10-424-599-17537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
```

```
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Wainer, George
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
TITLE OF INVENTION: Cytokines
FILE REPERBNCE: C1039/7026/FICL
CURRENT APPLICATION NUMBER: US/09/824,468
FURRENT APPLICATION NUMBER: 09/286,098
PRIOR APPLICATION NUMBER: 09/286,098
PRIOR APPLICATION NUMBER: 09/286,098
PRIOR PILING DATE: 1999-04-02
NUMBER OF SEQ ID NOS: 105
SEQ ID NO 103
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 574, Application US/0988326

Publication No. US20030026801A1

GENERAL INFORMATION:
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
TITLE OF INVENTION: Methods for Enhancing Cancer;
TITLE OF INVENTION: Goll Lysis and Treating Cancer;
FILE REFERENCE: C1039/7052 (AMS)
CURRENT FILING DATE: 2001-06-22
PRIOR PILING DATE: 2000-06-22
NUMBER OF SEQ ID NOS: 848
SOFTWARE: PRAESEQ for Windows Version 3.0
SEQ ID NO 574
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0%; Pred. No. 1.7e+02;
Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.0%; Pred. No. 1.7e+02;
Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Synthetic oligonucleotide
NAMB/KEY: misc_feature
LOCATION: (0)
1 CTHER INFORMATION: phosphodiester backbone
US-09-888-326-574
                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:

COTHER INFORMATION: Synthetic Sequence

US-09-824-468-103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 rccardadcrrccrdad 17
                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
US-09-888-326-574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

Search completed: May 4, 2006, 09:01:05 Job time : 300.851 secs

1 rccarcacrrccrcag 17

```
RESULT 1
US-11-127-654-858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 2
US-10-619-279-8
                                                                                                   IYPE: DNA
  000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 858, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 8, Appli
Sequence 27, Appl
Sequence 133, Appl
Sequence 842, Appl
Sequence 842, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Appli
Appli
Appli
Appl
Appl
                                                                                                                                   May 4, 2006, 08:17:52; Search time 456.437 Seconds (without alignments) 178.449 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence (Sequence (Sequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Published Applications NA New:*

1: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq1:*

2: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*

3: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*

3: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*

5: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*

6: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*

7: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*

8: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*

9: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*

10: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*

11: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*

12: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*

13: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq2:*

14: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

15: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

16: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

17: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

18: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*

19: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*
                    GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-11-127-654-858
US-10-619-279-8
US-10-382-82-8
US-11-296-572-8
US-11-127-654-193
US-11-127-654-193
US-11-134-918-8
US-11-031-460-8
US-11-099-683-82
US-11-099-683-82
US-11-099-683-82
US-11-099-683-82
US-11-099-683-82
US-11-099-683-82
US-11-099-683-82
                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                           9306428 segs, 2036268586 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                 nucleic search, using sw model
                                                                                                                                                                                                                                                           1 tecatgagettectgagett 20
                                                                                                                                                                                                                                                                                                   IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                          length: 0
length: 2000000000
                                                                                                                                                                                                                  US-10-789-758A-5
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq
seq
                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
117
117
117
117
117
117
117
                                                                                                   OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB
Maximum DB
                                                                                                                                                                                                                                                               Seguence:
                                                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Regult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ģ
```

```
## Sequence 858, Application US/11127654

## Sequence 858, Application US/11127654

## Sequence 858, Application No. US20050250726A1

## GENERAL INFORMATION:

## APPLICANT: Krieg, Arthur M.

## APPLICANT: Berg, Daniel J.

## TITLE OF INVENTION: IMMUNOSTIMILATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC

## TITLE OF INVENTION: IMMUNOSTIMILATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC

## TITLE OF INVENTION: IMMUNATORY DISEASES

## FILE OF INVENTION NUMBER: US/11/127,654

## CURRENT APPLICATION NUMBER: US 10/112,653

## PRIOR PILING DATE: 2002-03-29

## PRIOR PILING DATE: 2001-03-29

## NUMBER OF SEQ ID NOS: 1040

## SOFTWARE: Patentin version 3.2

## ENGRAPH: 20

## LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 191269,
Sequence 191269,
Sequence 804676,
Sequence 804677,
Sequence 751057,
Sequence 6840, Ap
Sequence 6840, Ap
Sequence 29145, A
Sequence 29145, A
                                                                   Sequence 11, Appl
Sequence 11, Appl
Sequence 570, App
Sequence 570, App
Sequence 11139,
Sequence 111596,
Sequence 65, Appl
Sequence 65, Appl
Sequence 2898, Ap
Sequence 81170, A
Sequence 81170, A
Sequence 90026, A
Sequence 90026, A
Sequence 90026, A
Sequence 90026, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
4 US-110-382-822-11

7 US-11-134-918-11

7 US-11-134-918-11

7 US-11-051-486-11

7 US-11-051-68-570

8 US-10-56-623-70

8 US-10-563-81205

8 US-10-925-065A-747839

10S-10-925-065A-821205

10S-10-301-480-10187

10S-10-301-480-10187

10S-10-301-480-10187

10S-10-301-480-10126

10S-10-301-480-101269

10S-10-301-480-804677

10S-10-301-480-804677

10S-10-301-480-804678

10S-10-301-480-804678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.0%; Score 20; DB 17; Best Local Similarity 100.0%; Pred. No. 2.7; Matches 20; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
US-11-127-654-858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - 1 TCCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGAGCTTCCTGAGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial sequence
```

```
1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
Sequence 8, Application US/10619279
PUblication No. US20050267057A1
GENERAL INFORMATION:
APPLICAMT: Krieg, Arthur M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
CURRENT APPLICATION NUMBER: US/10/619,279
CURRENT FILING DATE: 2003-07-14
FRIOR APPLICATION NUMBER: US 08/738,652
FRIOR APPLICATION NUMBER: US 08/738,652
FRIOR APPLICATION NUMBER: US 08/738,652
FRIOR APPLICATION NUMBER: US 08/738,653
FRIOR APPLICATION NUMBER: US 08/738,653
FRIOR PELING DATE: 1995-02-07
FRIOR PELING DATE: 1995-02-07
FRIOR PELING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: FASCESCQ for Windows Version 3.0
SEQ ID NO 8
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Kline, Joel N.
APPLICANT: Kline, Deal N.
APPLICANT: Kline, Deal N.
APPLICANT: Steinberg Alfred D.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPREBRUE: C1039/7048 (AMS)
CURRENT APPLICATION NUMBER: US/10/435,656
CURRENT FILING DATE: 1094-00
PRIOR APPLICATION NUMBER: US 08/276,358
PRIOR APPLICATION NUMBER: US 08/286,063
PRIOR PILING DATE: 1995-02-07
PRIOR PLLING DATE: 1995-02-07
PRIOR PLLING DATE: 1996-10-30
NUMBER OF SEQ ID NOS: 56
SOFTWARE: PREUSED FOR WINDOWS Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
85.0%; Score 17; DB 10; Length 20;
Best Local Similarity 100.0%; Pred. No. 88;
Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 10;
88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ) OTHER INFORMATION: Synthetic oligonucleotide
US-10-435-656-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: Synthetic Oligonucleotide
US-10-619-279-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            / Match 85.0%; Score 17; DB Local Similarity 100.0%; Pred. No. 88; tes 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 8, Application US/10435656 Publication No. US20050277604A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rccarcadecriccreae 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 8
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

```
PRESULT 5, 922-8

PRESULT 2, 922-8

PRESULT 2, 922-8

PRESULT SIGNATION: UNICOMATION: UNICOMATio
```

ô

ઠે 셤

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Klinen, Denins
APPLICANT: Klinen, Denins
APPLICANT: Klinen, Denins
APPLICANT: Klinen, Denins
APPLICANT: Steinberg, Alfred D.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPREBRUE: C1039/7048 (AMS)
CURRENT APPLICATION NUMBER: US/11/134,918
CURRENT FILING DATE: 2005-05-03
PRIOR APPLICATION NUMBER: US/09/818,918
PRIOR APPLICATION NUMBER: US/09/818,918
PRIOR PILING DATE: 1994-07-15
PRIOR PILING DATE: 1994-07-15
PRIOR APPLICATION NUMBER: US/08/386,063
PRIOR APPLICATION NUMBER: US/08/78,652
PRIOR PILING DATE: 1996-10-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match

85.0%; Score 17; DB 17; Length 20;

Best Local Similarity 100.0%; Pred. No. 88;

Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                85.0%; Score 17; DB 17; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Synthetic oligonucleotide US-11-134-918-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 56
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 8, Application US/11134918; Publication No. US20050267064A1; GENERAL INFORMATION:
                                                       1 TCCATGAGCTTCCTGAG 17
                            TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 rccargagcrrccrgag 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 193, Application US/11127654
; Bequence 193, Application US/11127654
; Publication No. US20050250726A1
; GENERAL INFORMATION:
    APPLICANT: Krieg, Arthur M.
; APPLICANT: Berg, Daniel J.
; TITLE OF INVENTION: INFLAMMATORY DISEASES
TITLE OF INVENTION: INFLAMMATORY DISEASES
; FILE REPERENCE: C103-706-06-12
; PRIOR APPLICATION NUMBER: US 10/112,653
; PRIOR FILING DATE: 2001-03-29
; PRIOR FILING DATE: 2001-03-29
; NUMBER OF SEQ ID NOS: 1040
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 193
; LENGTH: 20
                                                                                                                                                                                                                      Sequence 27, Application US/11127654
; Sequence 27, Application US/11127654
; Publication No. US20050250726A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Berg, Dankel J.
; TITLE OF INVENTION: INFLAMMATORY DISEASES
; TITLE OF INVENTION: INFLAMMATORY DISEASES
; TITLE OF INVENTION: INFLAMMATORY DISEASES
; FILE REFERENCE: C1039.70060US01
; TITLE OF INVENTION: UNMBER: US/11/127,654
; CURRENT FILING DATE: 2005-05-05
; PRIOR APPLICATION NUMBER: US 60/279,642
; PRIOR PILING DATE: 2001-03-29
; PRIOR FILING DATE: 2001-03-29
; NUMBER OF SEQ ID NOS: 1040
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 27
; LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                  ö
                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
  DB 14; Length 20;
88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85.0%; Score 17; DB 17; Length 20; 100.0%; Pred. No. 88; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 85.0%; Score 17; DB 17; Length 20; Best Local Similarity 100.0%; Pred. No. 88; Matches 17; Conservative 0; Mismatches 0; Indels
                                                Indels
                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-193
Query Match 85.0%; Score 17; DB Best Local Similarity 100.0%; Pred. No. 88; Matches 17; Conservative 0; Mismatches
                                                                                                                      1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGAGCTTCCTGAG 17
                                                                                           1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 rccarcaccrrccrcag 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-11-127-654-193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
```

윱

ð g

```
Sequence 82, Application US/11099683

Sequence 82, Application US/11099683

Publication No. US20060019916A1

GENERAL INFORMATION:
APPLICANT: Krieg, Arthur
APPLICANT: VOLIMEr, JOG9
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACIDS FOR INDUCING IL-10 RESPONSES
FILE REFERENCE: C1037.70047US01
CURRENT APPLICATION NUMBER: US/11/099,683
CURRENT APPLICATION NUMBER: US 60/558,951
PRIOR APPLICATION NUMBER: US 60/558,951
PRIOR FILING DATE: 2004-04-02
NUMBER OF SEQ ID NOS: 143
SOFTWARE: PatentIn version 3.3
SEQ ID NO 82
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                             ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REFERENCE: C1039/7023/HCL;
CURRENT FELICHON NUMBER: US/10/619,279
CURRENT FILING DATE: 1997-114
PRIOR APPLICATION NUMBER: US 08/960,774
PRIOR APPLICATION NUMBER: US 08/738,652
PRIOR APPLICATION NUMBER: US 08/386,063
PRIOR FILING DATE: 1996-10-30
PRIOR FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 17; DB 17; Length 20;
Pred. No. 88;
0; Mismatches 0; Indels
                                                                                                                                                                 DB 17; Length 20;
88;
                                                                                                                                                                                                                          0; Indels
                                                                 ; OTHER INFORMATION: Synthetic oligonucleotide US-11-067-587-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Synthetic Oligonucleotide
                                                                                                                                                              Query Match

85.0%; Score 17; DB
Best Local Similarity 100.0%; Pred. No. 88;
Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
US-10-619-279-11
'Sequence 11, Application US/10619279
'Publication No. US20050267057A1
'GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85.0%; Sco
100.0%; Pr
tive 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                   1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                        1 rccardagcrrccrdag 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 rccarcaccrrccrcasc 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Artificial Sequence
TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
US-11-099-683-82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-11-099-683-82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                          ö
                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOHERALI TRYCKHOLON:
JAPPLICANT: Kline, Joel N.
JAPPLICANT: Kline, Joel N.
JAPPLICANT: Kline, Joel N.
JAPPLICANT: Klinman, Dennis
JAPPLICANT: Mumbur Louis
JAPPLICANTON: Immunostimulatory Nucleic Acid Molecules
JAPPLICANTON: Immunostimulatory Nucleic Acid Molecules
JAPPLICANTON NUMBER: US/10/67,587
JAPPLICANTON NUMBER: US/10/619,18
JAPPLICANTON NUMBER: US 08/276,358
JAPPLICANTON NUMBER: US 08/276,358
JAPPLICANTON NUMBER: US 08/366,063
JAPPLICANTON NUMBER: US 08/386,063
                          ;
0
                                                                                                                                                                                                                                                                                                                                                          STREAL INFURANTION:

APPLICANT: Krieg, Arthur M.
APPLICANT: Kline, Joel N.
APPLICANT: Kline, Joel N.
APPLICANT: Slinman, Dennis
APPLICANT: Steinberg, Alfred D.
TITIE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REFERENCE: C1039/7048 (AMS)
GURRENT FILING DATE: 2005-01-07
PRIOR APPLICATION NUMBER: US/09/818,918
PRIOR APPLICATION NUMBER: US/09/818,918
PRIOR APPLICATION NUMBER: US 08/276,358
PRIOR RILING DATE: 1994-07-15
PRIOR APPLICATION NUMBER: US 08/386,063
PRIOR RILING DATE: 1995-10-30
NUMBER OF SEQ ID NOS: S6
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 85.0%; Score 17; DB 17; Length 20; Best Local Similarity 100.0%; Pred. No. 88; Matches 17; Conservative 0; Mismatches 0; Indels
                          Indels
                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , OTHER INFORMATION: Synthetic oligonucleotide US-11-031-460-8
Best Local Similarity 100.0%; Pred. No. 88; Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                             Sequence 8, Application US/11031460 Publication No. US20050277609A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 8, Application US/11067587
Publication No. US20060003955A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 rccarcaccrrccrcad 17
                                                                                   1 TCCATGAGCTTCCTGAG 17
                                                                                                                                      1 rccarcaccrrcrcas 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                          RESULT 10
US-11-031-460-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-11-067-587-8
```

셤

ð

ö

Gaps

```
Ouery Match 85.0%; Score 17; DB 12; Length 21; Best Local Similarity 100.0%; Pred. No. 89; Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                 ; OTHER INFORMATION: Synthetic Oligonucleotide US-10-382-822-11
SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 11 LENGTH: 21 TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Search completed: May 4, 2006, 10:07:23
Job time: 456.437 secs
                                                                                                                                                                                                                                                                                                                                                         1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Gaps
                                                                                                                    Gaps
                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                      JUNEARL INCOMMINION.

JAPPLICANT: Kline, Joel N.

APPLICANT: Steinberg, Alfred D.

TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules

TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules

CURRENT PELING DATE: 2003-05-09

CURRENT FILING DATE: 2003-05-09

PRIOR PELING DATE: 1994-07-15

PRIOR APPLICATION NUMBER: US 08/386,063

PRIOR PILING DATE: 1996-10-30

NUMBER OF SEQ ID NOS: 56

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 11

FUNDING DATE: 100 NOS: 56

SEQ ID NO 11

FUNDING DATE: 100 NOS: 56

SEQ ID NO 11

FUNDING DATE: 100 NOS: 56

SEQ ID NO 11
                                                          DB 10; Length 21;
89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 11, Application US/10382822
; Bequence 11, Application US/10382822
; Publication No. US20060058251A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Krieg, Arthur M.
; APPLICANT: Steinberg, Alfred D.
; TITLE OF INVENTION: Infectious Disease
; TITLE OF INVENTION: Infectious Disease
; TITLE OF INVENTION: Infectious Disease
; TITLE PEPERBUCE: C01039 70062 US
; CURRENT APPLICATION NUMBER: US/10/382,822
; CURRENT APPLICATION NUMBER: US 09/630,319
; PRIOR FILING DATE: 2000-07-31
; PRIOR PILING DATE: 1997-10-30
; PRIOR PILING DATE: 1997-10-30
; PRIOR PILING DATE: 1995-10-30
; PRIOR PILING DATE: 1995-02-07
; PRIOR PILING DATE: 1995-02-07
; PRIOR PILING DATE: 1994-07-15
; NUMBER OF SEQ ID NOS: 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 10; Length 21;
89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
; OTHER INFORMATION: Synthetic oligonucleotide
US-10-435-656-11
                                                          Query Match 85.0%; Score 17; DB Best Local Similarity 100.0%; Pred. No. 89; Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0%; Pred. No. 89;
Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                      Sequence 11, Application US/10435656
Publication No. US20050277604A1
GENERAL INFORMATION:
                                                                                                                                                                    1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGAGCTTCCTGAG 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                 RESULT 14
US-10-435-656-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-382-822-11
     US-10-619-279-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                    δ
                                                                                                                                                                                                                   임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

This Page Blank (uspto)

Thu

OM nucleic

Run on:

Sequence:

Searched:

Database

ö

Result No.

ò

```
other sequences.

CE 1 (bases 1 to 20)

RS Schwartz,D.A. and Krieg,A.M.

Use of rucleic acids containing unmethylated CPG dinucleotide in the treatment of LPS-associated disorders

PR 25-FEB-1997 US 60/039405

PR 26-FEB-1997 US 60/039405

PR 26-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD069973 27-AUG-2002 Use of nucleic acids containing unmethylated CPG dinucleotide in the treatment of LPS-associated disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                        PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism='Artificial Sequence'. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
100.0%; Score 20; DB 6; Length 20;
Best Local Similarity 100.0%; Pred. No. 18;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6; Length 20;
                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                   Immunostimulatory nucleic acid molecules
Patent: US 6239116-A 10 29-MAY-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .20
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.0%; Score 20; DB Best Local Similarity 100.0%; Pred. No. 18; Matches 20; Conservative 0; Mismatches
                                                                                                                                20 bp 1
Sequence 10 from patent US 6239116.
AR154681
AR154681.1 GI:15122734
                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .20
/organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                   Unclassified.
1 (bases 1 to 20)
Krieg, A.M. and Kline, J.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD069973.1 GI:22615576
JP 2001513776-A/62.
synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD069973
                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                  Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                Bource
                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                  KEYWORDS
                                                                                             RESULT 5
AR154681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD069973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                          LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 08-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (bases 1 to 20)
Krieg, A.M. and Weiner, G.
Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines
Patent: US 6218311-A 105 17-APR-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Libases 1 to 20)
Krieg, A.M. and Weiner, G.
Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines
Patent: Use 5218371-A 100 17-APR-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 20; DB 6; Length 20; 100.0%; Pred. No. 18;
                                                                                                                                                                                     6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
  Immunostimulatory nucleic acid molecules Patent: US 6207646-A 10 27-MAR-2001; Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 18;
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                       100.0%; Score 20; DB
100.0%; Pred. No. 18;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR146393 20 bp DN
Sequence 105 from patent US 6218371.
AR146393.1 GI:15109582
                                                                                                                                                                                                                                                                                                                                                                                                                                           AR146388 20 bp DP
Sequence 100 from patent US 6218371.
AR146388.1 GI:15109577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                       DNA.
                                                                                               /organism="unknown"
/mol_type="unassigned
                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                   Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
    TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
AR146388
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR146393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
```

ð

1 TCCATGACGTTCCTGACGTT 20

ઠે

1 TCCATGACGTTCCTGACGTT 20

ò

ö

Gaps

;;

Length 20;

셤

```
other sequences; artificial sequences.

Cher sequences; artificial sequences.

Cher sequences; artificial sequences.

RS Wagner, H. and Lipford, G.

Method of controlling hematopoiesis by using CpG oligonucleotide

AL CORY PHARNACEUTICALS GMBH, CORY PHARNACEUTICALS GROUP INC

CORY PHARNACEUTICALS GMBH, CORY PHARNACEUTICALS GROUP INC

OS Artificial Sequence

PN JP 2002514397-A/105

PD 21-NAX-2002

PP 14-NAX-1999 JP 2000547969

PR 14-NAX-1999 US 09/241653 PI

HERNANN WAGNER, GRAYSON LIPPORD

PC C12NIS/09, AGIK31/70, AGIK39/39, CO7H21/04//AGIK45/00, C12NIS/00

CC Synthetic Sequence

FT Source

/organism='Artificial Sequence'.
                                                                                                                                                                                                                                                                                                                                                                                BD205615

20 bp DNA linear PAT 17-JUL-2003
Method of controlling hematopoiesis by using CpG oligonucleotide.
BD205615
BD205615.1 GI:33015385
JP 2002514397-A/105.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD222610 20 bp DNA linear PAT 17-JUL-2003 Compositions of CPG and saponin adjuvants and uses thereof.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD222610.1 GI:33032380
JP 2002522510-A/2.
Quillaja saponaria
Quillaja saponaria
Quillaja saponaria
Sukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons; rosids; eurosids I; Fabales; Quillajaceae; Quillaja.
/organism='Artificial Sequence'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6; Length 20;
                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                               Score 20; DB 6;
Pred. No. 18;
; Mismatches 0

    .20
    /organism="synthetic construct"

                                                                 /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 20; DB 100.0%; Pred. No. 18; Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic_DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                    TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                               ch 100.0%; Si Similarity 100.0%; P. 20; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 (bases 1 to 20)
Kensil, C.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD222610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
            FŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
BD222610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                RESULT 9
BD205615
                            PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                     Synthetic construct
Switcheric construct
Switcheric construct
Switcheric construct
other sequences artificial sequences.

ther sequences; artificial sequences.

E 1 (bases 1 to 20)
S Barackman, J., Simph, M., Ugozoli, M., Kazazu, J., Donnelly, J.,
Ott, G.S. and Ohagan, D.
Microemulaions with Adsorbed Macromoelecules and Microparticles
Chiron Corporation
OS Artificial Sequence
PN JP 2002537102-A1
PD 05-NOV-2002
PP 09-PEB-2000 JP 2000600618
PR 29-JUL-1999 US 60/146391, 28-OCT-1999 US 60/161997, PR
26-PEB-1999 US 60/121858
PI john barackman, manmohan simph, mildred ugozoli, jina kazazu, john
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        john barackman, manmohan simph, mildred ugozoli, jina kazazu, john
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD205610 20 bp DNA linear PAT 17-JUL-2003
Method of controlling hematopoiesis by using CpG oligonucleotide.
BD205610
                                                                                                                               PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OS Artificial Sequence
PN JP 2002514397-A/100
PD 21-MAY-2002
PP 14-MAY-1999 JP 2000547969
PR 14-MAY-1999 US 09/241653 PI
HERMANN WAGNER, GRAYSON LIPPORD
PC C12N15/09, A61K31/70, A61K39/39, C07H21/04//A61K45/00, C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
other construct
1 (bases 1 to 20)
Wagner, H. and Lipford, G.
Method of controlling hematopoiesis by using CpG oligonucleotide
Patent: JP 2002514397-A 100 21-MAY-2002;
CORY PHARMACEUTICALS GMBH, CORY PHARMACEUTICALS GROUP INC
                                                                                                                buly0417 20 bp DNA linear PAT 17-JUL-20
Microemulsions with Adsorbed Macromoelecules and Microparticles.
BD190417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0%; Pred. No. 18;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gary s ott,derek ohagan
Oligonucleotide
Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BD205610.1 GI:33015380
JP 2002514397-A/100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic Sequence
                                                                                                                                                                                    BD190417.1 GI:33000156
JP 2002537102-A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     donnelly,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M M M M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD205610
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 8
                                                                                                        BD190417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
```

ઠે 셤 ö

Gaps

```
PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-APR-1999 JP 2000542030
03-APR-1998 US 60/080729
ARTHUR M KRIEG,GEORGE WEINER
AGIK38/00,AGIK31/7088,AGIK39/00,AGIP15/00,AGIP35/00,AGIP37/04,
AGIK37/02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-APR-1999 JP 2000542030
03-APR-1998 US 60/080729
ARTHUR M KRIEG, GEORGE WEINER
AGIKKS/00, AGIK31/7088, AGIK39/00, AGIP15/00, AGIP35/00, AGIP37/04,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stringer Constitution Stringer Stringer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N BD261157.1 GT:33070927

DP 2002510644-A/105.

Synthetic construct

SM synthetic construct

SM synthetic construct

Construct

Construct

Cother sequences, artificial sequences.

B 1 (bases 1 to 20)

Krieg,A.M. and Weiner,G.

Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines

L Patent: JP 2002510644-A 105 09-APR-2002;

UNIVERSITY OF IOWA REBEARCH FOUNDATION

OS Artificial Sequence

PN JP 2002510644-A/105

PP 03-APR-1999 JP 2000542030

PR 03-APR-1999 UP 2000542030

PR 03-APR-1999 US 60/080729

PR ATTHUR M KRIEG,GEORGE WEINER

PC A61KASH/00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                           BD261152 20 bp DNA linear PAT 17-JU Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Methods and products for stimulating the immune system using immunotherapeutic oligonucleotides and cytokines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ce 1. .20 /organism='Artificial Sequence'
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö

    .20
    forganism="synthetic construct"
|moi type="genomic DNA"
|db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 20; DB
100.0%; Pred. No. 18;
vative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGACGTTCCTGACGTT 20
            TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                        BD261152.1 GI:33070922
JP 2002510644-A/100.
synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD261157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCUS
                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                               RESULT 12
BD261152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD261157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Я
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic construct

synthetic construct

contaruct

co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 17-JUL-2003
Compositions of CPG and saponin adjuvants and uses thereof Patent: JP 2002522510-A 2 23-JUL-2002;
AQUILA BIOPHARMACEUTICALS INC
08 Quillaja saponaria
PN JP 200252510-A/2
PD 33-JUL-2002
PP 03-JUL-2002
PP 06-AUG-1999 JP 2000564661
PR 10-AUG-1999 US 60/095913,08-APR-1999 US 60/128608 PI CHARLOTTE A KENSIL
CGANCS-1999 (CCANCS-1999 US 60/095913,08-APR-1999 US 60/128608 PI CGANCS-1999 US 60/128608 PI CGANC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-FEB-1999 US 60/121792
GUIDO GRANDI, RINO RAPPUOLI, MARZIA MONICA GIULIANI, MARIAGRAZIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A61K39/095, A61K31/7088, A61K39/39, A61P31/04//C07K14/22, C12N15/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BDNA linear PAT 17-JUL-2 Enhancement of Neisseria antigen bactericidal activity using CG mocificontaining oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ce 1. .20 /organism='Artificial Sequence'. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism='Quillaja saponaria'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"

    .20
    forganism="Quillaja saponaria"
|mol_type="genomic DNA"
|db_xref="taxon:32244"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 100.0%; Score 20; DB Best Local Similarity 100.0%; Pred. No. 18; Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 18;
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BD251265
BD251265.1 GI:33061035
JP 2002537353-A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD251265
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
```

g

ò

δ

```
Search completed: May 4, 2006, 03:52:00 Job time : 466.368 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSEEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
     SOURCE
ORGANISM
                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OS Artificial Sequence
N JP 2002516294-A/86
PD 04-JUN-2002
PF 21-MAY-1999 JP 2000550515
PR 22-MAY-1998 US 60/086393
PI MICHAEL J MCCLUSKIE, HEATHER L DAVIS
PC A61X39/00, A61X9/10, A61X9/16, A61X9/50, A61X9/51, A61X31/70, A61X39/ PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic construct
other sequences, artificial sequences.

Char sequences, artificial sequences.

Char sequences, artificial sequences.

Char sequences, artificial sequences.

Mccluskie,M.J. and Davis,H.L.

Methods and products for inducing mucosal immunity
Methods and inducing mucosal immunity
Methods and inducing mucosal immunity
Methods and inducing mucosal
                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                           ce 1. .20
/organism='Artificial Sequence'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ce 1, .20 /organism='Artificial Sequence'
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BD261307 20 bp DNA linear Methods and products for inducing mucosal immunity. BD261307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 100.0%; Score 20; DB 6; Length 20; Best Local Similarity 100.0%; Pred. No. 18; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                Score 20; DB 6; Length 20;
Pred. No. 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ### BD261311 20 bp DNA linear Methods and products for inducing mucosal immunity. #### BD261311. GI:33071081
JP 2002516294-A/90.
                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunostimulatory synthetic oligonucleotide
Key
                             Location/Qualifiers

    .20
    forganism="synthetic construct"
|mol type="genomic DNA"
|db_xref="taxon:32630"

    .20
    forganism="synthetic construct"
|mol_type="genomic DNA"
|db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A61P31/00, A61P35/00, A61P37/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGITCCTGACGIT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD261307.1 GI:33071077
JP 2002516294-A/86.
Synthetic Sequence
                                                                                                                                                                                                                                                                                                             Query Match

Best Local Similarity 100.0%;

Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                        source
  SELL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                            Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD261307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BD261311
                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
ô
                                                                                                                                                                                                                   OS Artificial Sequence
PN JP 2002516294-A/90
PN JP 2005516294-A/90
PF 21-MAY-1999 JP 2000550515
PR 22-MAY-1998 US 60/086393
PI MICHAEL J MCCLUSKIE, HEATHER L DAVIS
AGIK39/00,A61K9/10,A61K9/16,A61K9/50,A61K9/51,A61K31/70,A61K39/ PC
                                                                   1 (bases 1 to 20)
Mocluskie, M.J. and Davis, H.L.
LOEB HEALTH RESEARCH INSTITUTE AT THE OTTAWA HOSPITAL, CORY
PHARMACEUTICALS. GROUP INC
OS ATTIFICIAL SROUP INC
OS ATTIFICIAL SQUENCE
PD 04-JUN-2002
PP 21-MAY-1999 JP 2000550515
PR 22-MAY-1998 US 60/086393
PR MICHAEL J MCCLUSKIE, HEATHER L DAVIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism='Artificial Sequence'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                          A61P31/00,A61P35/00,A61P37/00
immunostimulatory synthetic oligonucleotide
Key

    .20
    forganism="synthetic construct"
|mol type="genomic DNA"
|db_xref="taxon:32630"

synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 20; DB Best Local Similarity 100.0%; Pred. No. 18; Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
```

This Page Blank (uspto)

Мау

Run on:

OM nucleic

Scoring table:

Searched:

Minimum DB Maximum DB

Database

Perfect score:

Sequence:

```
Oligonucleotides containing at least 1 unmethylated CpG dinucleotide affect the immune response in a subject by activating natural killer cells or redirecting a subject's immune response from a Th2 to a Th1 response by inducing monocytic and other cells to produce Th1 cytokines. These nucleic acids containing at least 1 unmethylated CpG can be used as
Aaz99174 Inflammat
Aaz99004 CGG motif
Aaz60277 Immunosti
Aac60277 Immunosti
Aah20390 CGG motif
Aah20300 CGG immunosti
Aaf59500 Immunosti
Aaf59501 Immunosti
Aaf59745 Immunosti
Aaf599745 Immunosti
Aaf599745 Immunosti
Aaf599745 Immunosti
Aaf599745 Immunosti
Aaf59974 Immunosti
Aaf599710 Immunosti
Aaf59971 Immunosti
Aaf59973 Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unmethylated cytosine-guanine dinucleotide containing oligonucleotide 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ss; unmethylated CpG dinucleotide; immune response; natural killer cell; Th2 response; Th1 response; Th1 cytokine; hepatitis B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Use of oligonucleotides containing an unmethylated CpG dinucleotide - useful as, e.g. adjuvant with antigen, or nucleic acid encoding antigen for inducing immune response in subject.
                                                                                                                                                                                                                                                                                                                                ALIGNMENTS
                                    AAC60277
AAC64136
AAC64136
AAH50390
AAH50390
AAH50380
AAH50580
AAF59506
AAF59506
AAF59748
AAF99748
AAF99753
AAF99753
                                                                                                                                                                                                                                                                                            AAF99749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (OTTA-) OTTAWA CIVIC LOEB RES INST.
(QIAG-) QIAGEN GMBH.
(IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 14; Page 35; 67pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-US004703.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97US-0040376P.
                                                                                                                                                                                                                                                                                                                                                                                      AAV60950 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                    14-DEC-1998 (first entry)
    Schorr J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-520792/44.
   1000.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9840100-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Davis HL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                             AAV60950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          useful
                                                                                                                                                                                                                                                                                                                                                                  RESULT 1
                                                                                                                                                                                                                                                                                                                                                                              AAV60950
    Chlamydia ~ .
Nucleotid
Nucleotid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aav47683 Unmethyla
Aav27667 Immunosti
Aaz41946 IL-12 sec
Aaz41949 IL-12 sec
Aax78802 HPV fusio
Aav11943 CpG adjuv
Aav74242 CpG-N mot
Aav74242 CpG-N mot
Aav74242 CpG-N mot
Aav88536 Cytosine-
Aaz88191 Chlamydia--
Aaz61010 Nucleotid
                                                                                                                                                                                                                                                                                                                                                                              ť
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aav60950 Unmethyla
Aav47683 Unmethyla
                                                                                4, 2006, 01:23:12; Search time 150.46 Seconds (without alignments) 885.910 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Description
               5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                    9993994
                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                            4996997 segs, 3332346308 residues
               version 5
- 2006 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                            nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ41949
AAX78802
AAX78802
AAV4234
AAV4244
AAX74244
AAX88536
AAX88536
AAZ61012
AAZ61012
AAZ48025
AAZ48027
AAZ48027
AAZ48027
AAZ48027
AAZ48027
AAZ48027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV27667
AAZ41946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV60950
AAV47683
                                                                                                                                                      1 tecatgaegtteetgaegtt 20
                                                                                                                                                                                       Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                          geneseqn2000s:*
geneseqn2001as:*
geneseqn2001bs:*
geneseqn2002bs:*
geneseqn2003as:*
geneseqn2003as:*
geneseqn2003as:*
               GenCore (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       geneseqn2003ds:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         geneseqn20058:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             geneseqn2004bs:
                                                                                                                                                                                                                                                                                                                                          Geneseq 21:*
geneseqn1980s:*
geneseqn1990s:*
                                                                                                                                                                                                                                                         seq length: 0
seq length: 200000000
                                                                                                                            US-10-789-758A-6
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTITY NUC
                          Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
```

Score

Result

ö

Gaps

ö

Indels

ö

Pred. No. 4.7; Mismatches

888888

셤 ઠ

```
20; Conservative
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loca
Matches
                    Matches
                                                                                                                                                                              AAV27667
                                                                                                                                                          RESULT
                                                                                                                                                                                                                    ઠે
                                                                                             셤
                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This sequence represents an unmethylated CpG dinucleotide, and can be used in the method of the invention. The method is for treating a subject having, or at risk of having an acute decrement in air flow, comprising administering a nucleic acid sequence containing at least one unmethylated CpG. The nucleic acids containing an unmethylated CpG the nucleic acids containing an unmethylated CpG this acids containing an unmethylated CpG this acids to a subject by activating natural killer cells (NK) or redirecting a subject's immune response from a Th2 cytokines. They can be used to treat pulmonary disorders having an immunologic component, such as asthma or environmentally induced airway disease. They can also be used to treat diseases associated with Gram-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inflammatory bowel disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  abscess, haemorrhagic shock, disseminated intravascular coagulation, or an inflammatory response to lipopolysaccharide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sepsis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
Or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        positive bacterial infections or endotoxaemia including bacterial meningitis, neonatal sepsis, cystic fibrosis, inflammatory bowel diseand liver cirrhosis, Gram-negative pneumonia, Gram-negative abdominal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unmethylated CpG dinucleotide; immune response; bacterial meningitis; natural killer cell activation; NK cell; Th2 response; neonatal sepsi pulmonary disorder; asthma; environmentally induced airway disease; bacterial infection; endocoxaemia; therapy; cystic fibrosis;
                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Use of nucleic acids containing an unmethylated CpG - for treating subject having or at risk of having an acute decrement in air flow
an adjuvant, specifically to induce an immune response against an antigenic protein, and are used particularly for virally mediated disorders, e.g. hepatitis B virus infection
                                                                                                                                                              ö
                                                                                                                Query Match
100.0%; Score 20; DB 2; Length 20;
Best Local Similarity 100.0%; Pred. No. 4.7;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                               Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibiting an inflammatory response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unmethylated CpG dinucleotide 1826.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 35; Page 27; 65pp; English.
                                                                                                                                                                                                   1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inflammatory bowel disease; ss
                                                                                                                                                                                                                                                                                                                                        AAV47683 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US003678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-0039405P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schwartz DA, Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-480941/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9837919-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                        20-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                  AAV47683;
                                                                                                                                                                                                                                                                                                   RESULT 2
```

100.0%; Score 20; DB 2; Length 20;

Query Match

```
AAV27641-751 represent immunostimulatory oligodeoxyribonucleotides (ODNs) of the invention. The ODNs contain at least one unmethylated CpG dinucleotide, and have the formula: 5' NIXICGX2X12', where at least one uncleotide separates consecutive CpGs, X1 is adenine, guanine, or ucleotide separates consecutive CpGs, X1 is adenine, guanine, or thymine, X2 is cytosine or thymine, N is any nucleotide and N1+N2 is 0-26 bases with the provision that N1 and N2 does not contain a CCGG tetramer or more than one CCG or CGG trimer OR 5' NIXIZCGX3X4N 3', where at least cone nucleotide separates consecutive CpGs, X1 and X2 are selected from CGT, GpG, GpA, ApT and ApA, X3 and X4 are selected from TpT or CpT, N is any nucleotide and N1+N2 is 0-26 bases with the provision that N1 and N2 cone not contain a CCGG tetramer or more than one CCG or CGG trimer. The ODNs activate lymphocytes in a subject and redirect a subject's immune cresponse from a Th2 to a Th1 (e.g. by inducing monocytic cells and other cells to produce Th1 cycokines, including IL-12, IFN-gamma and GM-CSF).

The ODNs can be used to treat or prevent an asthmatic disorder, additional during antibody generation in a mammal such as a mouse or a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New immunostimulatory nucleic acid molecules - which contain at least one unmethylated CpG dinucleotide, used for treating e.g. tumours, infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunostimulatory; oligodeoxyribonucleotide; ODN;
unmethylated (cyd dinucleotide; activate; lymphocyte; immune response;
Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease;
desensitisation therapy; artificial adjuvant; antibody generation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunostimulatory oligodeoxyribonucleotide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'Match 100.0%; Score 20; DB 2; Length 20; Local Similarity 100.0%; Pred. No. 4.7; les 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 35; Page 84; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
100.08; FI
                                                                                                                                      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                           1 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 rccardacgrrccrdacgrr
                                                                                                                                                                                                                                                                                                                                                                                                   AAV27667 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97WO-US019791.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96US-00738652.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Krieg AM, Kline JN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1998-272127/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9818810-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-MAY-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV27667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
```

m

IL-12 secretion inducing CpG oligonucleotide 94.

(first entry)

24-JAN-2000

AAZ41949;

AAZ41949 standard; DNA; 20 BP.

AAZ41949

```
Sequences AA241856-Z41949 are phosphorothioate CpG oligonucleotides which are used in the invention comprises stimulating an immune response in a subject comprising administering to a subject exposed to an antigen, an immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide to induce a synergistic antigen specific immune response. The methods are useful for treating cancer by stimulating an antigen specific immune response. The methods are useful for treating cancer by stimulating an antigen specific immune response. The methods are useful for treating cancer by stimulating an antigen specific immune carcinoma, fibroma, Lymphoma, melanoma, neuroblastoma, retinoblastoma, carcinoma, ilbroma, Lymphoma, melanoma, neuroblastoma, retinoblastoma, and glioma. The methods are also useful for treating infectious diseases, and glioma. The methods may also be useful for treating infectious diseases.

The methods and compositions may also be applied to treat cancer and tumours in non human subjects, e.g. cats and dogs. Neoplasias affecting espicitural livestock may also be treated and include leukaemia, haemanglopericytoma and bovine oclar neoplasia. Chronic, infectious, contagious diseases of sheep and goats caused by the bacterium of sheep caused by jaagsiekte may also be treated. Of oligonucleotides can be useful in activating B cells, MK cells, and antigen presenting calls, and antigen and antigen antibody and antibody and antigen presenting calls.
                                                                                                                                                                                              CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion; human PBMC; immune response; cancer; HTV; bacterial disease; asthma; neoplastic disorder; jaagsiekte; B cell; NK cell; ss; cytokine; antigen presenting cell; infection; allergic disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel synergistic combinations of immunostimulatory oligonucleotides and immunopotentiating cytokines are useful for stimulating the immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dependent cellular cytotoxicity and can be used as an adjuvant in conjunction with tumour antigens to protect against a tumour challenge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20; DB 2; Length 20; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                      IL-12 secretion inducing CpG oligonucleotide 91.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 8; Page 88; 91pp; English.
                     AAZ41946 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0080729P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US007335.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (IOWA ) UNIV IOWA RES FOUND
                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Weiner G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-620169/53.
                                                                                                                                                                                                                                                                                                                                                           WO9951259-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-APR-1998;
                                                                                                         24-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                     14-0CT-1999
                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Krieg AM,
                                                                 AAZ41946;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ByBtem
AAZ41946
```

```
Sequences AAZ41856-Z41949 are phosphorothioate CpG oligonucleotides which are used in the invention comprises stimulating an immune response in a subject comprising administering to a subject exposed to an antigen, an immunopotentiating administering to a subject exposed to an antigen, an immunopotentiating administering to a subject exposed to an antigen, an immunopotentiating administering to a subject exposed to an antigen, an immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide con immunopotentiating cancer by stimulating an antigen specific immune response. The methods are useful for treating cancer by stimulating an antigen specific immune cancer antigen. The methods can also be used to treat cancer in the methods are also useful for treating infectious diseases, and glioma. The methods may also be used to treat allergic diseases, e.g. asthma. The methods and compositions may also be applied to treat cancer and tumours contradious diseases of sheep and goas Neoplasias affecting agricultural livestock may also be treated and include leukaemia, hamman subjects, e.g. cats and dogs. Neoplasias affecting agricultural livestock may also be treated and include leukaemia, contragious diseases of sheep and goats caused by the bacterium contrader and marrounders, and marrounders and marrounders, and mittigen presenting cells, and ham an unique presenting caused by laggiekte may also be treated. Orgo oligonucleotides can be contagious in activating Beells, NK cells, and antigen presenting cells, and antigen presenting cells, and mitigen presenting contagions diseases.
                                                                                                                                           CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion; human PBMC; immune response; cancer; HIV; bacterial disease; asthma; neoplastic disorder; jaagsiekte; B cell; NK cell; ss; cytokine; antigen presenting cell; infection; allergic disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel synergistic combinations of immunostimulatory oligonucleotides and immunopotentiating cytokines are useful for stimulating the immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            such as monocytes and macrophages. CpG oligonucleotides enhance antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dependent cellular cytotoxicity and can be used as an adjuvant in conjunction with tumour antigens to protect against a tumour challenge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 4.7; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 8; Page 89; 91pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; FAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 recardacerrecerater 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US007335
                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0080729P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Krieg AM, Weiner G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-620169/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                     02-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-APR-1998;
                                                                                                                                                                                                                                                                                                            WO9951259-A2
                                                                                                                                                                                                                                                                                                                                                         14-OCT-1999.
                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bystem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

ö

ö

Gaps .; 0

0; Indels

0; Mismatches

20; Conservative

Matches

100.0%;

Query Match Best Local Similarity

20

rccargacgrrccrgacgrr 20

g

RESULT 6

```
This sequence represents a CpG adjuvant that can be used in the vaccine composition of the invention. The vaccine comprises a polyoxyethylene ether or seter (I), not in the form of a vesicle, pharmaceutically acceptable excipient and an antigen (Ag) or antigenic composition. The vaccine can be used to treat or prevent infections (by bacteria, viruses or other parasites), allergy and cancer. (I), which are safe, easy to sterilize and simple to administer, are powerful vaccine adjuvants, able to induce a systemic immune response when administered (non-invasively) to the mucosa. The response is at least as good as that from conventional systemic injection. (I) are effective at low concentration, have low
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN; viral antigen; bacterial antigen; paralite; therapputic; growth factor; toxin; tumour suppressor; cytokine; apoptotic protein; interferon; hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 4.7; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                   Vaccine to protect against infections, allergy and cancer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.7;
han 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST.
(IOWA ) UNIV IOWA RES FOUND.
(QIAG-) QIAGEN GMBH.
                                                                                                                                                                      (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       reactogenicity and are well tolerated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                         Claim 16, Page 32; 52pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멾
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US010408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0047209P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0047233P
                                                                           99WO-EP002278
                                                                                                              98GB-00007805
                                                                                                                                98GB-00020956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV74237 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CpG-N motif S-ODN 1826 DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (revised)
                                                                                                                                                                                                            Hermand P;
                                                                                                                                                                                                                                               WPI; 1999-620290/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9852581-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-MAY-1997;
W09952549-A1
                                                                                                            09-APR-1998;
25-SEP-1998;
                                                                           29-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-MAR-2003
15-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-NOV-1998
                                     21-0CT-1999
                                                                                                                                                                                                          Friede M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV74237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 8
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAX78791-X78801 represent nucleic acid sequences which encode novel constructs comprising an E6 or E7 protein or E6/E7 fusion protein from HPV (represented in AAY25375-Y25386). These constructs are optionally linked to an immunological fusion partner and an immunomodulatory CpG oligonucleotide. The products of the invention can be used to induce an immune response in a partient to an HPV antigen. They can also be used for preventing or treating HPV induced tumours. This sequence represents a CpG oligonucleotide which is used in the method of the invention
                                                                                                                                                                                                                         Fusion protein; E6 protein; E7 protein; E6/E7; immunomodulator; tumour; immunological fusion partner; CpG oligonucleotide; immune response; HPV antigen; prevention; treatment; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CpG adjuvant, vaccine; polyoxyethylene ether; polyoxyethylene ester; antigen; infection; allergy; cancer; therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E7 or E6/E7 fusion protein from HPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 20; DB 2; Length 20; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                        HPV fusion protein CpG oligonucleotide 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 11; Page 36; 62pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 rccardacgrrccrdacgrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ31943 standard; DNA; 20 BP.
                                                                           AAX78802 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Composition comprising an E6, induce immune response to HPV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                        98WO-EP008563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97GB-00027262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerard CMG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CpG adjuvant oligo 1001.
                                                                                                                                                                                                                                                                                                                       Human papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-405485/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dalemans WLJ,
                                                                                                                                                                                                                                                                                                                                                                WO9933868-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                        18-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-JAN-2000
                                                                                                                                                    06-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                  08-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                            AAX78802;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ31943
```

AAZ31943 ID AAZ3 RESULT 7

a ò

ö

Gaps

```
WO9852581-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                  20-MAR-2003
15-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                            AAV74242;
                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (IOWA
                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                RESULT 10
 8
                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                             ANV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a method for enhancing the immunostimulatory effect of an antigen encoded by nucleic acid contained in a nucleic acid construct. The method involves determining the CpG-N and CpG-S motifs present in the construct, removing neutralising CpG (CpG-N) motifs and optionally inserting stimulatory CpG (CpG-S) motifs in the construct, thereby producing a nucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a paraster. They can also be used for expression of a therapeutic
                                                                                                                                                                                                                                polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines, apoptotic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN; viral antigen; bacterial antigen; parasite; therapeutic; growth factor; toxin; tumour suppressor; cytokine; apoptotic protein; interferon; hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for enhancing the immunostimulatory effect of an antigen or enhancing the expression of a therapeutic polypeptide.
                                           Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for enhancing the immunostimulatory effect of an antigen or enhancing the expression of a therapeutic polypeptide.
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                     100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 4.7; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                               Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOEB RES INST
Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wu T;
₹
                                                                                          Example 1; Page 64; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schorr J,
Schorr J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (OTTA-) OTTAWA CIVIC HOSPITAL
                                                                                                                                                                                                                                                                                                                                                                                                                                     ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CpG-N motif SOS-ODN 1980 DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US010408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0047209P
97US-0047233P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV74244 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                            20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Krieg AM,
Krieg AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (QIAG-) QIAGEN GMBH.
                       WPI; 1999-059712/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-059712/05
                                                                                                                                                                                                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-MAY-1997;
20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9852581-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-2003
15-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Davis HL,
Davis HL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV74244;
                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IOWA )
                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
AAV74244
ID AAV7
ઠ
                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
ö
                                                                                   AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a
                                                                                                             method for enhancing the immunostimulatory effect of an antigen encoded by nucleic acid contained in a nucleic acid construct. The method by nucleic acid contained in a nucleic acid construct. The method removing acterning the CpG-N and CpG-S motifs and optionally inserting stimulatory CpG (CpG-N) motifs and optionally inserting atimulatory CpG (CpG-S) motifs in the construct, thereby producing a nucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a parasite. They can also be used for expression of a therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a method for enhancing the immunostimulatory effect of an antigen encoded by nucleic acid contained in a nucleic acid construct. The method involves determining the CpG-N and CpG-S motifs present in the construct,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines, apoptotic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN; viral antigen; bacterial antigen; parasite; therapeutic; growth factor; toxin; tumour suppressor; cytokine; apoptotic protein; interferon; hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for enhancing the immunostimulatory effect of an antigen or enhancing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 20; DB 2; Length 20;
100.0%; Pred. No. 4.7;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        enhancing the immunostimulatory effect of expression of a therapeutic polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wu T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Page 64; 109pp; English.
Example 1; Page 64; 109pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rccarcaccirccrcaccir 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Schorr J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98WO-US010408.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0047209P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97US-0047233P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV74242 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CpG-N motif O-ODN 2061 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Davis HL, Krieg AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (QIAG-) QIAGEN GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-059712/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes a formulation (A) comprising a cytosine-guanosine dinucleotide motif (CpG) oligonucleotide and T-independent type 1 or type 2 antigens or polysaccharide conjugate antigen. The present sequence represent a specifically claimed CpG oligonucleotide. A vaccine composition comprising the formulation is used for inducing a immune response to T-independent type 1 or type 2 antigen or polysaccharide conjugate antigen. The use of immunostimulatory CpG oligonucleotide acts
removing neutralising CpG (CpG-N) motifs and optionally inserting stimulatory CpG (CpG-S) motifs in the construct, thereby producing a nucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a parasite. They can also be used for expression of a therapeutic polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines, apoptocic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A vaccine composition for inducing a immune response to T-independent type 1 or type 2 antigen or polysaccharide conjugate antigen.
                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytosine-guanosine dinucleotide motif; CpG; immunomodulation; unmethylated; vaccine; immunostimulation; immune response; T-independent type 1 antigen; T-independent type 2 antigen; polysaccharide conjugate antigen; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0%; Pred. No. 4.7;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                Score 20; DB 2; Length 20;
Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cytosine-guanosine dinucleotide motif oligonucleotide #3.
                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                            Seguence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  as an adjuvant to pneumococcal polysaccharides
                                                                                                                                                                                                                                                Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 4.7
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pricels J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                         1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 6; Page 31; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Laferriere CAJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAX88536 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-EP008562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97GB-00027262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-SEP-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-405369/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dalemans WLJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9933488-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX88536;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   888888888888
                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                    ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence represents DNA encoding Chlamydia trachomatis 60 kD outer membrane protein (OMP) gene-derived CpG oligonucleotide 4. This oligonucleotide contains a CpG motif. It was tested for its ability to act as an adjuvant for the M7A-alpha peptide (AAY42723), which can induce inflammatory cardiomyopathy (ICM) in mice. It was found to act as a potent immunostimulator, whereas a oligonucleotide from the same source which did not contain a CpG motif (AAZ28133) was hardly effective as an adjuvant. Inflammatory cardiomyopathy peptides (AAY42723, AAY42725-Y42731) can be used with such an adjuvant and an excipient in a vaccine for decreasing ICM
                                                                                                                                                                Chlamydia trachomatis outer membrane protein gene-derived CpG oligo 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gape
                                                                                                                                                                                            Heart disease; inflammatory; autoimmune; cardiomyopathy; adjuvant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptides that induce or suppress inflammatory cardiomyopathy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 4.7; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                 /note= "OTHER = phosphorothioate linkage"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neu N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Penninger JM,
                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 2; Col 25; 17pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGITCCTGACGIT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                      /mod base= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ61012 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                 98US-00133774.
                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-00133774
                                                                                  AAZ28191 standard; DNA; 20
                                                                                                                                                                                                                                                                                                          æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAY-2000 (first entry)
                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hessel AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (AMGE-) AMGEN CANADA INC.
                                                                                                                                                                                                                                                                                            ..20
*tag=
                                                                                                                                                                                                                                                 Chlamydia trachomatis.
                                                                                                                                                                                                         CpG motif; vaccine; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-589735/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                              Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bachmaier K,
                                                                                                                                                                                                                                                                                                                                                                                                                 12-AUG-1998;
                                                                                                                                       20-DEC-1999
                                                                                                                                                                                                                                                                                                                                                              US5962636-A.
                                                                                                                                                                                                                                                                                                                                                                                       05-OCT-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ61012;
                                                                                                                                                                                                                                      Synthetic
                                                                                                            AAZ28191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
AAZ61012
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                       RESULT 12
                                                                    AAZ28191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               axxxa
axxxa
                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
```

Gaps

; 0

99WO-US017100.

```
WO200006588-A1.
                                                                                      27-JUL-1999;
                                                                                                                   27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9958118-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-NOV-1999.
                                                          10-FEB-2000
 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                            Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ48025;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
AAZ48025
 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ60933-Z61015 represent immunostimulatory stereoisomers of CpG oligomucleotides. The sequences are derived from generic nucleic acid sequences may also be derived. The immunostimulatory nucleic acids can be co-administered with an antigen to induce an antigen-specific immune response. The immunostimulatory nucleic acids can be co-administered with an antigen to induce an antigen-specific immune response. The immunostimulatory nucleic cards of an also be used in methods for redirecting a subject s immune response from a Th2 to a Th1, for treating asthma, for desensitising a subject against the occurrence of an allergic reaction in response to contact with an allergen, for activating an immune cell, especially a lymphocyte or a dendritic cell expressing a cancer antigen or for treating cancer. The immunoinhibitory nucleic acid can be used to prevent is excessive due to having received an immune response in the subject is excessive due to having received an immune stimulating compound. The immunoinhibitory nucleic acid can be used to treat a subject having or risk of an inflammatory disease, especially inflammatory bowel disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                        Immunostimulatory; stereoisomer; CpG oligonucleotide; Th2; Th1; asthma; allergic reaction; allergen; cancer antigen; cancer; immunoinhibitory; inflammatory disease; inflammatory bowel disease; autoimmune disease; gingivitis; psoriasis; sepsis; se.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunostimulatory, stereoisomer, CpG oligonucleotide, Th2; Th1; asthma, allergic reaction, allergen, cancer antigen, cancer; immunoinhibitory; inflammatory disease; inflammatory bowel disease; autoimmune disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
             Nucleotide sequence of an immunostimulatory CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleotide sequence of an immunostimulatory CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                        Immunostimulatory and immunoinhibitory stereoisomers of CpG oligonucleotides useful for immunotherapy of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          autoimmune disease, gingivitis, psoriasis and sepsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.0%; Pred. No. 4.7
                                                                                                                                                                                                                                                                                (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure, Page 12; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gingivitis; psoriasis; sepsis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP
                                                                                                                                                                                                        99WO-US017100
                                                                                                                                                                                                                                     98US-0094370P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ61010 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                 (IOWA ) UNIV IOWA RES
                                                                                                                                                                                                                                                                                                                                           WPI; 2000-195254/17.
                                                                                                                                            WO200006588-A1
                                                                                                                                                                                                        27-JUL-1999;
                                                                                                                                                                                                                                     27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAY-2000
                                                                                                                                                                         10-FEB-2000
                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                               Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ61010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ61010
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

```
AAZ60933-Z61015 represent immunostimulatory stereoisomers of CpG oligonucleotides. The sequences are derived from generic nucleic acid sequence, from which immunoshimbitory sequences may also be derived. The immunostimulatory nucleic acids can be co-administered with an antigen to induce an antigen-specific immune response. The immunostimulatory nucleic acids can also be used in methods for redirecting a subject withmune from a Th2 to an allergic reaction in response to subject against the occurrence of an allergic reaction in response to contact with an allergen, for activating an immune cell, especially a lymphocyte or a dendritic cell expressing a cancer antigen or for treating cancer. The immunoinhibitory nucleic acid can be used to prevent an immune response, especially where the immune response in the subject is excessive due to having received an immune simulating compound. The immunoinhibitory nucleic acid can be used to treat a subject having or at inflammatory disease, especially inflammatory bowel disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haematopoiesis; regulation, CpG oligonucleotide; phosphorothioate; immune remodeling; thrombopoiesis; anaemia; immune system; cancer; immune response; allergic reaction; infectious disease; asthma; thrombocytopaemia; immunchaemolytic disorder; dasorder; haemoglobinopathy; kidney failure; chronic inflammatory disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immune remodeling inducing CpG oligonucleotide SEQ ID NO:105.
                                                                                                                                                                                                                                                                         Immunostimulatory and immunoinhibitory stereoisomers of CpG oligonucleotides useful for immunotherapy of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           autoimmune disease, gingivitis, psoriasis and sepsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                        (IOWA ) UNIV IOWA RES FOUND.
(CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 12; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ48025 standard; DNA; 20 BP.
98US-0094370P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-MAR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rheumatoid arthritis; ss.
                                                                                                                                                                                                          WPI; 2000-195254/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
```

```
The present invention describes a method using CpG containing oligonucleotides (ONs) for regulating immune system remodeling and for city containing and for city containing and for city containing and comprises: (1) administering an ON having a sequence including at least 1 days after the ON is administered to the subject to antigen at least 3 days after the ON is administered to the subject to produce an antigen-specific immune response: 5' XICGX2 3' (1), where the ON = includes at least 8 nucleotides, C and G = unmethylated, and Xi and X2 = nucleotides. The method can be used for inducing an immune response against an antigen such as cells, cell extracts, proteins, polysaccharide conjugates, lipids, glycolipids.

CX = nucleotides. The method can be used for inducing an immune response against an autigen such as subject at risk of developing cancer or an illergens. It can be used in a subject at risk of developing cancer or allergerse. It can be used in a subject at risk of developing cancer or allerger reaction. It can also be used for treating an infectious disease, allergic diseases and asthma, as well as thrombocytopaenia which allerger induced due nuclimmune disorder such as aldiopathic thrombocytopenic purpura, or resulting from accidental or therapeutic cadiation exposure. It can also be used for treating anaemia such as fidney failure, and chemical adequate iron stores, chronic disease such as kidney failure, and chronic inflammatory disorder such as rheumatoid arthritis, or anaemia resulting from accidental or therapeutic radiation exposure. AZZ47932 to AZZ48029 represent phosphorothioate CGG oligonucleotides used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                           CpG containing oligonucleotides for, e.g. inducing an antigen-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                    (CPGI-) CPG IMMUNOPHARMACEUTICALS GMBH.
(CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 67; 116pp; English.
99WO-IB001285
                                             98US-0085516P.
                                                                                                                                                                                                                                                                                                                  specific immune response
                                                                                                                                                                                              Wagner H, Lipford G;
                                                                                                                                                                                                                                           WPI; 2000-062261/05.
14-MAY-1999;
                                             14-MAY-1998;
02-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                           Use of
```

Search completed: May 4, 2006, 02:44:24 Job time: 155.46 secs 셤

ö

Gaps ö

0; Indels

0; Mismatches

Best Local Similarity 100.0%; Matches 20; Conservative C

1 TCCATGACGTTCCTGACGTT 20

ð

OM nucleic

Run on:

Sequence:

```
Oryza sativa (indica cultivar-group)

Oryza sativa (indica cultivar-group)

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Ehrhartoideae; Oryzae; Oryzae;

El (Bases; Lto 498)

Ma, L., Wangc, J., Chen, C., Liu, X., Su, N., Li, L., Wang, X., Cao, M., Jiao, Y., Sun, N., Zhang, X., Bao, J., Sun, D., Zhao, H., Yuan, L., Wong, C.K.S., Deng, X. M. and Wang, J.

An analysis of transcriptional regulation of the rice genome and its comparison to Arabidopsis

Unpublished (2004)

Contact: Chen Chen
Department of Bioinformatic

Beijing Institute of Genomics

Chinese Academy of Sciences, Beijing 101300, China

Tel: 86-10-80488676
                  CA109803 SCUTHENOR
CA153904 SCUPREZO3
CA264770 SCAGRT304
CA162313 SCBGS7311
BU253412 603415072
CV181074 tai68C11.
CC110844 NDL. 76114
DR806582 ZM BFD003
CC334934 OĞWFRQ4TH
AL205647 Tetracodon
BU205165 603951055
AL242653 Tetracodon
CG318330 OGXB866TH
CD91886 EST663247
                                                                                                                                                                                                                                                                                                                                                       498 DNA linear GSS 21-SEP-2004 OBIFCC032298 Oryza sativa Express Library Oryza sativa (indica cultivar-group) genomic, genomic survey sequence.
                                                                                                                                                                                                   AG891719 Oryza sat
CG318342 OGXBB66TV
BQ882047 AGENCOURT
AL269221 Tetraodon
AL271542 Tetraodon
DN675999 CFW89-G09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .498
/organism="Oryza sativa (indica cultivar-group)"
/mol type="genomic DNA"
/mol type="genomic DNA"
/mol type="genomic DNA"
/mol type="genomic"
/mol type="genomic sequences"
/note="Oryza sativa exon trapped genomic sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 498;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 20; DB
Pred. No. 46;
; Mismatches
                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: chenchen@genomics.org.cn
CA113844
CA46501
CA153904
CA153904
CA264770
CA182313
BU253412
CC110844
DR806582
CC314934
CC334934
CC334934
CC3319646
CC311886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rice genomic sequence.
Class: exon-trapped.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ch 100.0%; S
1 Similarity 100.0%; P
20; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                         CL978668.1 GI:52411839 GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               83 TCCATGACGTTCCTGACGTT
                                                                                            2010
                                 Query Match
Best Local Similarity
 RESULT 1
CL978668/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
 0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CL978668 OSIFCC032
CW048863 104_287_1
CW036410 104_267_1
CW036410 104_267_1
CC709713 OGUBV23TV
CN2828800 000601AEP
CL970339 OSIFCC041
CW052877 104_308_1
CW124513 104_506_1
CW31458 0P_B8005
CW031458 0P_B8005
CW031589 104_260_1
CM531458 0P_B8005
CW031589 104_260_1
CM531458 0P_B8005
CW031458 0P_B8005
CW031458 0P_B8005
CM631458 0P_B8005
CW314580 BSC0016
CC260054 OG2CK84TV
AA171941 ZP24f01.8
CL165273 OSIFCC012
BF713668 BSTPBL223
CC260054 OG2CK84TV
AA171941 ZP24f01.8
CC165273 OSIFCC012
BF713668 BSTPBL223
CC260054 OG2CK84TV
AA171941 ZP24f01.8
CC1779555 104_388_1
CW218453 104_652_1
BF716608 BST002608
CM156508 GST002608
                                                                              May 4, 2006, 02:45:02; Search time 1417.59 Seconds (without alignments) 660.095 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                         82156650
            GenCore version 5.1.7
(c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                41078325 segs, 23393541228 residues
                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                  Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CL978668
CL978665
CW036410
CW036410
CN928980
CL970339
CW02877
CW124513
CW124513
CW31458
CW631458
CW631458
CW631458
                                                         - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BF713668
CG260054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA171941
CL179555
CW218453
BF156008
AW065908
CA158051
                                                                                                                                                       1 tccatgacgttcctgacgtt 20
                                                                                                                                                                            IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                             US-10-789-758A-6
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                            99 est1:*
99 est2:*
99 est4:*
99 est4:*
99 est6:*
90 est7:*
90 est7:*
90 gs82:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  922.0
877.0
855.0
885.0
845.0
                                                                                                                                                                                                                                                                                                                                                  EST:
                                                                                                                                                                                                                                                                                                                                                                                               Post-processing:
                                                                                                                                                                                                                                                                seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16.8
16.8
16.8
16.8
16.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                             Scoring table:
```

Minimum DB Maximum DB

Searched:

Database :

Result

ö

Gaps

```
Orion Genomics, LLC
                                                                                                                                                                                                                                                                                                                                                            104) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CW036410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CW036410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
CW036410/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                       CL978665
OBIPCC032295 Oryza sativa Express Library Oryza sativa (indica cultivar-group) genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CW048863 372 bp DNA linear GSS 28-OCT-2004 104 287 10513675_114_30211 Sorghum methylation filtered library (LibID: 104) Sorghum bicolor genomic clone 10513675, genomic survey
                                                                                                                                                                                                     Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Coryza sativa (indica cultivar-group)
Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Enhartoideae; Oryzeae; Oryza.

(bases 1 to 2799)
Ma.L., Wangc,J., Chen,X., Su,N., Li,L., Wang,X., Cao,M., Jiao,Y., Sun,N., Zhang,X., Bao,J., Sun,D., Zhang,X., and Wang,J.

Wong,G.K.S., Deng,X.W. and Wang,J.

Manalysis of transcriptional regulation of the rice genome and its comparison to Arabidopsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sorghum bicolor

Sukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.
1 (basea: 1 to 372)
Bedell, J.A., Budiman, M.A., Numberg, A., Citek, R.W., Robbins, D.,
Jones, J., Flick, E., Rohlfing, T., Fries, J., Bradford, K.,
McMenamy, J., Smith, M., Holeman, H., Roe, B.A, Wiley, G., Korf, I.F.,
Martienssen, R.A.
Martienssen, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .2799
|/organisma."Oryza sativa (indica cultivar-group)"
|/organisma."Oryza sativa (indica cultivar-group)"
|/mol.type="genomic DNA"
|/db xref="taxon:39946"
|/clone lib="Oryza sativa Express Library"
|/note="Oryza sativa exon trapped genomic sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 20; DB 10; Length 2799;
Pred. No. 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sorghum genome sequencing by methylation filtration PLoS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Chen Chen
Department of Bicinformatic
Beijing Institute of Genomics
Chinese Academy of Sciences, Beijing 101300, China
Tel: 86-10-80481559
Fax: 86-10-80488676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 20; DB Best Local Similarity 100.0%; Pred. No. 54; Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: chenchen@genomics.org.cn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2354 TCCATGACGTTCCTGACGTT 2335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CW048863.1 GI:54725593
                                                                                                                                           CL978665.1 GI:52411833
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rice genomic sequence.
Class: exon-trapped.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Bedell JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15660154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CW048863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                388.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
CW048863/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bource
                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
PUBMED
COMMENT
                                                         CL978665/c
                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                    REFERENCE
                                          RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DRIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      78036410 460 bp DNA linear GSS 28-OCT-2004 104 267 10503742 114 30374 Sorghum methylation filtered library (LibID: 104) Sorghum bicolor genomic clone 10503742, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Organ: leaf, Vector: pBCSK(-); Site 1: HincII; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 k fraction, ligated into HincII-digested pBCSK(-) vector and electropozated into B. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sorghum bicolox (sorghum)
Sorghum bicolox
Sorghum bicolox
Bukaryota, Viridiplantes, Streptophyta; Embryophyta; Tracheophyta;
Bukaryota, Viridiplantes, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida, Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.
I (bases I to 460)
Bedell, J.A., Budiman, M.A., Nunberg, A., Citek, R.W., Robbins, D.,
Jones, J., Flick, E., Rohlfing, T., Fries, J., Bradford, K.,
Rachenam, J., Smith, M., Holeman, H., Roe, B.A, Wiley, G., Korf, I.F.,
Martienssen, R.A.
Martienssen, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="Sorghum methylation filtered library (LibID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 92.0%; Score 18.4; DB 10; Length 372; Best Local Similarity 95.0%; Pred. No. 2.8e+02; Matches 19; Conservative 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sorghum genome sequencing by methylation filtration PLOS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Bedell JA
Orion Genomics, LLC
Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO 63108, USA
Tel: 314 615 6979
Fax: 314 615 5975
Fax: 314 615 5975
Fax: 314 615 5976
Fax: 314 615 5976
Fax: 314 615 5976
Fax: 314 615 5976
Fax: 314 615 6979
Fax: 314 615 6
                        St. Louis, MO 63108, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Sorghum bicolor"
/mol_type="genomic DNA"
/cultivar="ATx623"

    .372
    /organism="Sorghum bicolor"
/mol_type="genomic DNA"
/cultivar="ATx623"

4041 Protest Park Ave, St. Louis, M
Tel: 314 615 6979
Fax: 314 615 6979
Fax: 314 615 5975
Fax: 314 615 5975
Fax: 314 615 5975
Fax: 314 615 5975
Fax: 317 Forward
Seq primer: M13/pUC Forward
Class: methylation filtered
High quality sequence stop: 372.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db xref="taxon:4558"
/clone="10513675"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         267 rccardacerrccgdacerr 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CW036410.1 GI:54713140
```

S

셤

```
СL970339 1062 bp DNA linear GSS 21-SEP-2004 OSIFCCO41133 Oryza sativa Express Library Oryza sativa (indica cultivar-group) genomic, genomic survey sequence.
                                                                                                                                                                                                         To (Dasses 1 to 698)

Beuning, L., Bowen, J., Crowhurst, R., Gleave, A., Janssen, B., McArtney, S., Newcomb, R., Ross, G., Snowden, K., Walton, E. and Yauk, Y. McArtney, S., Newcomb, R., Ross, G., Snowden, K., Walton, E. and Yauk, Y. Unpublished (2004)

Contact: Gleave, A.

Contact: Gleave, A.

The Horticulture and Food Research Institute of New Zealand Ltd

Tel: OM Albert Rd, Mt Albert, Auckland, New Zealand

Tel: OG 40 9815 4200

Fax: OO 64 09 815 4200

Email: est@hortresearch.co.nz.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Sukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Berhartoideae; Oryzeae; Oryza.
1 (bases I to 1062)
Ma.L., Wangc,J., Chen,C., Liu,X., Su,N., Li,L., Wang,X., Cao,M., Jiao,Y., Sun,N., Zhang,X., Bao,J., Sun,D., Zhao,H., Yuan,L.,
Mong,G.K.S., Deng,X.W. and Wang,J.
An analysis of transcriptional regulation of the rice genome and uppublished (2004)
                                                                                                Malus x domestica
Malus x domestica
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, eudicotyledons,
rosids, eurosids I; Rosales; Rosaceae, Maloideae, Malus.
000601AEPA006237HT (AEPA) Pinkie expanding leaf Malus x domestica
cDNA clone AEPA006237, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="Leaf"
/dev stage="Expanding"
/clone_lib="(AEPA) Pinkie expanding leaf"
/nore="Vector: pBK-CMV; Library sequenced by Genesis
Research & Development"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 698;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Chen Chen
Department of Bioinformatic
Bejing Institute of Genomics
Chinese Academy of Sciences, Beijing 101300, China
Tel: 86-10-8048155
Fax: 86-10-80488676
Email: chenchen@genomics.org.cn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 17.4; DB 7;
Pred. No. 9.3e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Malus x domestica"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:3750"
/clone="AEPA006237"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86 rcaargacgrrccrgacgr 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGT 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CL970339.1 GI:52395287
                                                              CN928980.1 GI:48401793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rice genomic sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Class: exon-trapped
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . . 698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CL970339/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
    DEFINITION
                                                                                                                                                                                                                                                                          TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC709713

886 bp DNA linear GSS 19-JUN-2003
OGUBYZ3TV ZM 0.7_1.5 KB Zea mays genomic clone ZMMBMa0404D21,
genomic survey sequence.
CC709713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 07-JUN-2004
                                                                              /note="Organ: leaf; Vector: pBCSK(-); Site_1: HinclI; DNA prepared from purified nuclei was randomly_sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 bf fraction, ligated into HincII-digested pBCSK(-) vector and electroporated into B. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.
                                            'clone_lib="Sorghum methylation filtered library (LibID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 886)
Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T.,
Resnick, A., Fraser, C.M., Budiman, M.A., Bedell, J.A., Rohlfing, T.,
Citek, R.W., Nunberg, A., Robbins, D. and Lakey, N.
Unpublished (2002)
Other GSSs: OGUNY23TH
Contact: Cathy Whitelaw
                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:4577"
/clone="ZMMBMa040121"
/clone="hb="ZM 0.71.5KB"
/note="Vector: pBcSK-; Site 1: HincII; 0.7-1.5 kb
methylation filtered genomic DNA library"
                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                        92.0%; Score 18.4; DB 10; Length 460; 95.0%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 18.4; DB 9; Length 886;
Pred. No. 3e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9712 Medical Center Drive, Rockville, MD 20850, USA
Tel: 301-838-5843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Zea mays"
/mol type="genomic DNA"
/strain="B73"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           698 bp
/db_xref="taxon:4558"
/clone="10503742"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
1. .886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seg primer: TF
Class: methylation filtered
                                                                                                                                                                                                                                                                                                                                                                         291 TCCATGACGTTCCGGACGTT 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax: 301-838-0208
Email: whitelaw@tigr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC709713.1 GI:32114489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 92.0
Best Local Similarity 95.0
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                             Local Similarity
nes 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CN928980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rigr
                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                 Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 6
CN928980
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC709713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PEATURES
                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
```

ઠે 셤

Bource

ORIGIN

FEATURES

```
/note="Organ: leaf; Vector: pBCSK(-); Site_1: HincII; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electroporated into B. coli cells. This is a methylation filtered library."
                                                                                                                                               7M124513 659 bp DNA linear GSS 29-OCT-2004 104 504 11111819 148 34701 042 Sorghum methylation filtered library (Libib: 104) Sorghum bicolor genomic clone 11111819, genomic survey
                                                                                                                                                                                                                                                                                                        Sorghum bicolor (sorghum)
Sorghum bicolor
Sorghum bicolor
Sorghum bicolor
Sorghum bicolor
Suraryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD Spermatophyta; Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD (lade, Panicoideae, Andropogoneae, Sorghum.

1 (bases 1 to 659)
Bedell, J.A., Budiman, M.A., Nunberg, A., Citek, R.W., Robbins, D., Onnes, J., Flick, E., Rohlfing, T., Fries, J., Bradford, K., Mohenamy, J., Smith, M., Holeman, H., Roe, B.A, Wiley, G., Korf, I.F., Mathonowicz, P.D., Lakey, N., McCombie, W.R., Jeddeloh, J.A. and Martiensen, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fsbb001f048n16f0 Sorghum methylation filtered library (LibID: 104) Sorghum bicolor genomic clone fsbb001f048n16, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Sorghum bicolor"
/mol_type="genomic DNA"
/cultivar="Alx623"
/db_xref="taxon:4558"
/clone="1111819"
/clone_lib="Sorghum methylation filtered library (LibID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 17; DB 10; Length 659;
Pred. No. 1.5e+03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sorghum genome sequencing by methylation filtration PLoS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Becall Day
Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO 63108, USA
Tel: 314 615 6979
Fax: 314 615 5975
Fax: 31 615 5975
Email: jbedell@oriongenomics.com
Plate: 504 row: g column: 11
Seg primer: SWifor Forward
Class: methylation filtered
High quality sequence stop: 659.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         687 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSS.
Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              545 TCCATGACGTTCCTGAC 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CW372789
CW372789.1 GI:55091233
CW124513.1 GI:54817060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Bedell JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence.
                                                                                                                                                                                                                          sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15660154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CW372789
                                                                                                                                                    CW124513
                           317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CW372789/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                  RESULT 9
CW124513/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                              유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inote="Organ: leaf; Vector: pBCSK(-); Site_1: HincII; DNA prepared from purified nuclei was randomly sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electroporated into E. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               104 308 10521584 1 30092 Sorghum methylation filtered library (Libib: 104) Sorghum bicolor genomic clone 10521584, genomic survey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GSS 28-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sorghum bicolor
Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.
1 (bases 1 to 562)
Bedell,J.A., Budiman,M.A., Nunberg,A., Citek,R.W., Robbins,D.,
Jones,J., Flick,B., Rohlfing,T., Fries,J., Bradford,K.,
MoMenamy,J., Smith,M., Holeman,H., Roe,B.A, Wiley,G., Korf,I.F.,
Rabinowicz,P.D., Lakey,N., McCombie,W.R., Jeddeloh,J.A. and
Martienssen,R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
/cultivar="ATx623"
/db xref="taxon:4558"
/clone="10521584"
/clone_llb="Sorghum methylation filtered library (LibID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                        Gaps
                                                    (indica cultivar-group) "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                        Length 1062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sorghum genome sequencing by methylation filtration
PLoS Biol. 3 (1), e13 (2005)
                           1. 1062
/organism="Oryza sativa (indica cultivar-c
/mol_type="genomic DNA"
/db.ref="taxon:39946"
/clone lib="Oryza sativa Express Library"
/note="Oryza sativa Express Cibrary"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4011 Forest Park Ave, St. Louis, MO 63108, USA Tel: 314 615 6979
Fax: 314 615 5979
Fax: 314 615 5979
Fax: 314 615 5979
Fax: 314 615 5979
Email: jbedell@oriongenomics.com
Plate: 308 row: g column: 06
Seq primer: M13(40) Forward
Class: methylation filtered
High quality sequence stop: 562.
Location/Qualifiers
                                                                                                                                                                                                                     ch 87.0%; Score 17.4; DB 10; 11 Similarity 94.7%; Pred. No. 9.7e+02; 18; Conservative 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Sorghum bicolor"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           562 bp
     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                   599 TCCATGACGTTCCTGGCGT 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sorghum bicolor (sorghum)
                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGT 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CW062877.1 GI:54739607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Orion Genomics, LLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15660154
Contact: Bedell JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 17; Conserval
                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CW062877
```

TITLE JOURNAL PUBMED COMMENT

FEATURES

ORIGIN

ð

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

LOCUS DEFINITION

RESULT 8 CW062877

윱

ö

Gaps

ö

GSS 01-NOV-2004

```
Location/Qualifiers

1. 703

1. 703

2. Organism="Oryza punctata"

/mol type="genomic DNA"
/db xref="taxon:4537"
/clone="OP_Ba0057L22"
/lasue type="young leaves"
/lab host="DHST"
/lab host="DHIDS-T1 phage resistant"
/clone lib="OP_Ba"
/note="Vector: pAGIBAC1; Site_1: HindIII; Site_2: HindIII"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CW031589 782 bp DNA linear GSS 28-OCT-2004 104 260_10500896_114_30365 Sorghum methylation filtered library (LibID: 104) Sorghum bicolor genomic clone 10500896, genomic survey
                                               Email: sjackson@purdue.edu
Basecalling by phred version 0.020425.c. This sequence was derived
from the raw sequence read by clipping with lucy version 1.19s.
Bases 36-738 of the raw sequence (length 1024) were retained after
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Bukaryota, Viridiplantae, Liliopsida; Poales, Poaceae, PACCAD Calde, Panicoideae, Andropogoneae, Sorghum.

1 (Dases 1 to 782)

Bedell, J.A., Budiman, M.A., Nunberg, A., Citek, R.W., Robbins, D., Jones, J., Flick, E., Rohlfing, T., Fries, J., Bradford, K., McMenam, J., Smith, M., Holeman, H., Roe, B.A, Wiley, G., Korf, I.F., Rabinowicz, P.D., Lakey, N., McCombie, W.R., Jeddeloh, J.A. and Martienssen, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85.0%; Score 17; DB 10; Length 703;
100.0%; Pred. No. 1.5e+03;
.ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sorghum genome sequencing by methylation filtration PLoS Biol. 3 (1), e13 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO 63108, USA
Tel: 314 615 6979
Fax: 314 615 8975
Emai: jbedell@oriongenomics.com
Plate: 260 row: e column: 06
Seg primer: M13/pUC Forward
Class: methylation filtered
High quality sequence stop: 782.
Location/Qualifiers
                                                                                                                                                                                                                                     PCR PRIMETS
PCR PRIMETS
PORWARD: TAA TAC GAC TCA CTA TAG GG
BACKWARD: CAC TCA TTA GGC ACC CCA
Insert Length: 161 Std Brror: 0.00
Plate: 0057 row: L column: 22
Seg primer: TAA TAC GAC TCA CTA TAG GG
Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Sorghum bicolor"
/mol type="genomic DNA"
/cultivar="ATx623"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db xref="taxon:4558"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sorghum bicolor (sorghum)
Sorghum bicolor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              259 réchréncerréciene 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CW031589
CW031589.1 GI:54708321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Bedell JA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 85.0
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15660154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CW031589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CW031589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CW631458 703 bp DNA linear GSS 27-OCT-2004 OP Ba0057122.f OP Ba Oryza punctata genomic clone OP Ba0057122 5/, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Organ: leaf, Vector: pBCSK(-); Site_1: HincII; DNA prepared from purified nuclei was randomly_sheared, end-repaired, size fractionated to enrich for the 0.5 to 5 k fraction, ligated into HincII-digested pBCSK(-) vector and electropoxated into B. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oryza punctata
Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta,
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza
1 (bases 1 to 703)
2 (bases 1 to 703)
3 (bases 1 to 703)
3 (bases 1 to 703)
3 (bases 1 to 703)
4 (bases 1 to 703)
5 (bases 1 to 703)
6 (bases 1 to 703)
7 (bases 1 to 703)
8 (bases 1 to 703)
8 (bases 1 to 703)
8 (bases 1 to 703)
9 (bases 1 to
Sorghum bicolor

Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoldeae; Andropogoneae; Sorghum.

1 (bases 1 to 687)

1 (bases 1 to 687)

2 (bases 1 to 687)

3 (bases 1 to 687)

4 (bases 1 to 687)

5 (bases 1 to 687)

5 (bases 1 to 687)

6 (bases 1 to 687)

7 (bases 1 to 687)

8 (bases 1 to 687)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Sorghum bicolor"
/mol_type="genomic DNA"
/cullivar="ATX623"
/db_xref="tebb001f048n16"
/clone="febb001f048n16"
/clone="febb001f048n16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Scott A. Jackson
Jackson Laboratory
Purdue University
915 W. State St., West Lafayette, IN 47907, USA
Tel: 7654963621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Bedell JA
Orion Genomics, LLC
Orion Genomics, LLC
4041 Forest Park Ave, St. Louis, MO 63108, USA
Tel: 314 615 6979
Fax: 314 615 5975
Email: jbedellooriongenomics.com
Seq primer: f Forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85.0%; Score 17; DB 10; I
100.0%; Pred. No. 1.5e+03;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Class: methylation filtered
High quality sequence stop: 687.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CW631458.1 GI:54665420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 85.0
Best Local Similarity 100.
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . .687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oryza punctata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CW631458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CW631458/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
COMMENT
                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
```

ઠે 셤

ö

셤 8

```
CL965273 21-SBP-2004 OSIF SEP-2004 OSIFCC012064 Oryza sativa Express Library Oryza sativa (indica cultivar-group) genomic, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Laurasiatheria, Cetartiodactyla, Suina, Suidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Oryza sativa (indica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Mapoliophyta; Iliopsida; Poales; Poaceae;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
1 (bases 1 to 2805)
Ma, L., Wang, X., Ken, C., Liu, X., Su, N., Li, L., Wang, X., Cao, M., Man, L., Wang, Y., Sun, N., Zhang, X., Bao, J., Sun, D., Zhao, H., Yuan, L., An analysis of transcriptional regulation of the rice genome and Lits comparison to Arabidopsis
Unpublished (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF713668 287 bp mRNA linear EST 31-DEC-2001
ESTPBL223 differential display RT-PCR clones Sus scrofa cDNA clone
                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Oryza sativa (indica cultivar-group)"
| mol type="genomic DNA" |
| db xref="taxon:39946" |
| /db xref="taxon:39946" |
| /clone lib="foryza sativa Express Library" |
| /note="Oryza sativa exon trapped genomic sequences"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85.0%; Score 17; DB 10; Length 2805; 100.0%; Pred. No. 1.7e+03; ive 0; Mismatches 0; Indels
                                                             Length 1088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Chen Chen
Department of Bloinformatic
Beijing Institute of Genomics
Chinese Academy of Sciences, Beijing 101300, China
Tel: 86-10-80481559
Fax: 86-10-80488676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ponsuksili, S., Wimmers, K. and Schellander, K.
                                                             85.0%; Score 17; DB 6; L4
100.0%; Pred. No. 1.5e+03;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: chenchen@genomics.org.cn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                               85.0*,
100.0%; Fig.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2372 TCCATGACGTTCCTGAC 2356
                                                                                                                                                                                                                                                                                                                                                                                                                        CL965273
CL965273.1 GI:52385237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BF713668.1 GI:18002858
                                                                                                                                                                                                               308 rccardacerrccrdac 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rice genomic sequence.
Class: exon-trapped.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                 1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BL223, mRNA sequence.
BF713668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100...
These 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 287)
                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sus scrofa (pig)
                                                                             Best Local Similarity
Matches 17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
                                                               Query Match
                                                                                                                                                                                                                                                                                      RESULT 14
CL965273/c
                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
BF713668
                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   High quality sequence stop: 772.

Location/Qualifiers

1. 1088

1. 1088

1. 1088

1. 1088

1. 1088

1. 1088

1. 1089

1. 1089

1. 1080

| dextain="Salinsa river, CA"
| db_xref="texon:69293"
| clone="CDA74-A09"
| sex="mixed male and female"
| fissue_type="heads and internal organs combined"
| dev stage="adult"
| clone lib="SHGC-CDA"
| / dove="Vector: lambda ZAP Express/DBK-CMV; Site l: EcoRl
| clone lib="SHGC-CDA"
| / note="Vector: lambda ZAP Express/DBK-CMV; Site l: EcoRl
| stage="adult" | file stage senerated using the ZAP-cDNA method
| dev stage="adult" | file stage senerated using the ZAP-CDNA method
| stage cDNA library was generated using the ZAP-CDNA method
| stage cDNA library was generated using an oligo dT sequence
| preceded by a synthetic XhoI site. 5 prime adaptors were
| unidirectionally in the sense orientation with respect to
| the lacz promoter of pBK-CMV, An amplified library was
| prepared from approximately 3 million primary clones in
| the lambda ZAP Express vector. In vivo excision was then
| used to generate individual pBK-CMV phagemid clones for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gasterosteus aculeatus (three spined stickleback)

ENKaryora, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

ENKaryora, Metazoa; Chordata; Craniata; Euteleosteni;

Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;

Gasterosteidde; Gasterosteus.

Expressedieldes; Gasterosteus.

Kingsley, D.M., Peichel, C., Balabahdra, S., Grimwood, J., Dickson, M., Schmutz., and Myers, R.M.

Expressed sequence tags from Gasterosteus aculeatus

Unpublished (2003)

Contact: Kingsley, DM

HHMI and Department of Developmental Biology

Stanford University School of Medicine
Backman Center 8330, 279 Campus Drive, Stanford, CA 94305-5329, USA

Tel: 650 725 5954
                                                                                  /note="Organ: leaf, Vector: pBCSK(-); Site_1: HincII; DNA prepared from purified nuclei was randomly sheared, def-repaired, size fractionated to enrich for the 0.5 to 5 kb fraction, ligated into HincII-digested pBCSK(-) vector and electropozated into E. coli cells. This is a methylation filtered library."
                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CD5-05499 10-088 bp mRNA linear BST 12-JUN-2003 CDA74-A09 x1d-t SHGC-CDA Gasterosteus aculeatus cDNA clone CDA74-A09 5', mRNA sequence.
/clone="10500896"
/clone_lib="Sorghum methylation filtered library (LibID:
104)"
                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                         Query Match 85.0%; Score 17; DB 10; Length 782; Best Local Similarity 100.0%; Pred. No. 1.5e+03; Matches 17; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CD505499
CD505499.1 GI:31436068
                                                                                                                                                                                                                                                                                                                                                                                                                                              330 rccardacerrccrdac 346
                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGAC 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
CD505499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                         ORIGIN
```

```
Identification of porcine liver ESTS by differential display RT-PCR Unpublished (2001)
Contact: Ponsuksili S
Contact: Ponsuksili S
University of Animal Breeding Science
University of Bonn
Endenicher Allee 15, Bonn 53115, Germany
Seq primer: T7 SP6
High quality sequence stop: 287
POUYA=No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                     incoation/Qualifiers

1. 287

1. 287

2. Organism="Sus scrofa"

/mol_type="mRNA"

/db_xref="taxNA"

/clone="BL223"

/clone=lib="differential display RT-PCR clones"

/note="Organ: liver; cDNA fragments obtained from differential display RT-PCR banding patterns were cloned into pGEM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match

84.0%; Score 16.8; DB 2; Length 287;

Best Local Similarity 90.0%; Pred. No. 1.7e+03;

Matches 18; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 rccargacGrrccrgargcr 33
    TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
```

Search completed: May 4, 2006, 07:17:44 Job time : 1421.59 secs

This Page Blank (uspto)

```
100.0
20
24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3, Appli
Sequence 3, Appli
                                                                                                                                            4, 2006, 07:24:16; Search time 298.851 Seconds (without alignments) 553.412 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               / cgn2_6/ptodata/1/pubpna/USO7_PUBCOMB.seq:*
/ cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
/ cgn2_6/ptodata/1/pubpna/USO8_PUBCOMB.seq:*
/ cgn2_6/ptodata/1/pubpna/USO9B_PUBCOMB.seq:*
/ cgn2_6/ptodata/1/pubpna/USIOB_PUBCOMB.seq:*
                    GenCore version 5.1.7 (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                  19587084
                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                       9793542 segs, 4134689005 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Applications NA_Main:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                     - nucleic search, using sw model
                                                                                                                                                                                                                                                                               1 tccatgacgttcctgacgtt 20
                                                                                                                                                                                                                                                                                                                       IDENTITY NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length: 0
length: 2000000000
                                                                                                                                                                                                                             US-10-789-758A-6
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                      Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Published_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match
                                                                                                                                              Мау
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bed
                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB
Maximum DB
                                                                                                     OM nucleic
                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Result
No.
```

Sequence 100, App Sequence 105, App Sequence 1, Appli Sequence 1, Appli Sequence 86, Appli Sequence 90, Appl Sequence Sequence Sequence US-09-760-506-3 US-09-760-1013-3 US-09-824-468-100 US-09-949-194-1 US-09-8017-222-1 US-09-800-266A-96 US-09-800-266A-96 US-09-800-266A-96 US-09-805-007A-96 US-09-920-313-96 US-09-920-313-96 US-09-920-313-96 US-09-920-313-96 US-09-920-313-96 US-09-920-313-96 US-09-988-326-561 US-09-818-326-561 US-09-818-326-562 US-09-818-326-563 US-09-818-326-563 US-09-818-326-563 US-09-818-326-563 US-09-818-326-563 US-09-818-326-563 US-09-818-326-563 US-09-918-10

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence

1000.0 1000.0 1000.0 1000.0

Sequence Seq	for
20 3 US-09-776-479-302 20 3 US-09-776-479-949 20 3 US-09-776-479-949 20 3 US-09-776-479-951 20 3 US-09-776-479-952 20 3 US-09-776-479-953 20 3 US-09-776-479-953 20 3 US-09-776-479-955 20 3 US-09-776-479-957 20 3 US-09-776-479-957 20 3 US-09-776-479-953 20 3 US-09-776-479-102 20 3 US-09-776-479-152 20 3 US-09-776-479-152 20 3 US-09-776-479-153	TCCATGACGTTCCTGACGTT 20
24 20 100.0 20 3 US- 25 20 100.0 20 3 US- 26 20 100.0 20 3 US- 28 20 100.0 20 3 US- 29 20 100.0 20 3 US- 29 20 100.0 20 3 US- 30 20 100.0 20 3 US- 31 20 100.0 20 3 US- 32 20 100.0 20 3 US- 33 20 100.0 20 3 US- 34 20 100.0 20 3 US- 35 20 100.0 20 3 US- 36 20 100.0 20 3 US- 37 20 100.0 20 3 US- 38 20 100.0 20 3 US- 41 20 100.0 20 3 US- 42 20 100.0 20 3 US- 43 20 100.0 20 3 US- 44 20 100.0 20 3 US- 45 20 100.0 20 3 US- 46 20 100.0 20 3 US- 47 20 100.0 20 3 US- 48 20 100.0 20 3 US- 49 20 100.0 20 3 US- 40 20 20 10 100.0 20 3 US- 40 20 20 20 10 100.0 20 3 US- 40	OY 1 TCCATGACC Db 1 TCCATGACC RESULT 2 US-09-768-012-3 Sequence 3, Applicat; Patent No. US2001004 GENERAL INFORMATION: APPLICANT: MCCIUBK; TITLE OF INVENTION:

```
OTHER INFORMATION: Synthetic Sequence US-09-824-468-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) OTHER INFORMATION: Synthetic Sequence US-09-949-194-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/09949194
Patent No. US20020091097A1
GENERAL INFORMATION:
APPLICANT: Bratzler, Robert L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 rccargacgrrccrgacgrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 5
US-09-949-194-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 6
US-09-917-222-1
                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
TITLE OF INVENTION: Cytokines
FILE REFERENCE: C1039/7026/HGL
CURRENT APPLICATION NUMBER: US/09/824,468
FURRENT FILING DATE: 2001-04-02
PRIOR APPLICATION NUMBER: 09/286,098
PRIOR APPLICATION NUMBER: 09/286,098
PRIOR PILING DATE: 1999-04-02
NUMBER OF SEQ ID NOS: 105
SEQ ID NO 100
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 105, Application US/09824468
Patent No. US20020064515A1
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 5.6; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20; DB 3; Length 20;
Pred. No. 5.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
FILE REFERENCE: C1040/7010/HCL/MAT
CURRENT APPLICATION NUMBER: US/09/768,012
CURRENT APPLICATION NUMBER: US/09/768,012
PRIOR FILING DATE: 2001-01-22
PRIOR FILING DATE: 2000-01-20
NUMBER OF SEQ ID NOS: 4
SOFTWARE: FASEUSEQ for Windows Version 3.0
LENGTH: 20
                                                                                                                                                                                                                                                                                    FEATURE:

OTHER INFORMATION: Synthetic Sequence
NAME/CATION: (8) ... (8)
OTHER INFORMATION: Cytosine is unmethylated.
NAME/KEY: modified base
LOCATION: (17) ... (17)
JOCATION: (17) ... (17)
OTHER INFORMATION: Cytosine is unmethylated.
US-09-768-012-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 5.6
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) OTHER INFORMATION: Synthetic Sequence US-09-824-468-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 100, Application US/09824468
Patent No. US20020064515A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rccarcacerrccreacerr 20
                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-824-468-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-824-468-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

ઠે

```
TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and TITLE OF INVENTION: Cytokines FILE REPERBNCS: C1039/7026/HGL CURRENT APPLICATION NUMBER: US/09/824,468 CURRENT FILING DATE: 2001-04-02 RPIOR PAPLICATION NUMBER: 09/286,098 PRIOR FILING DATE: 1999-04-02 NUMBER OF SEQ ID NOS: 105 SOFTWARE PASLES FASLES for Windows Version 3.0 SEQ ID NO 105 LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1, Application US/09917222

Batent No. US20020110569A1

GRNERAL INFORMATION:
APPLICANT: Granoff, Dan
APPLICANT: Moe, Gregory R.
TITLE OF INVENTION: VACCINES FOR BROAD SPECTRUM PROTECTION
TITLE OF INVENTION: AGAINST DISEASES CAUSED BY NEISSERIA MENINGITIDIS
FILE REPERENCE: CHOROU
CURRENT APPLICATION NUMBER: US/09/917,222
CURRENT FILING DATE: 2001-07-27
PRIOR FILING DATE: 2000-07-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Petersen, Control of Structure of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 5.6; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 5.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
```

```
ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 9
US-09-895-007A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-895-007A-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 86
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-800-266A-90

Sequence 90, Application US/09800266A

Sequence 90, Application US/09800266A

Sequence 90, Application US/09800266A

Sequence 90, Application US/09800266A

SEQUENCE OF UNICONTION: Dearna M.

TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of TITLE OF INVENTION: US/09/800,266A

CURRENT APPLICATION NUMBER: US/09/800,266A

CURRENT APPLICATION NUMBER: US 60/187,214

PRIOR FILING DATE: 2000-03-03

NUMBER OF SEQ ID NOS: 146

SEQ ID NO 90

SEQ ID NO 90

LENGTH: 20

TUBLE OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 86, Application US/09800266A
Patent No. US20020156033A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Bratzler, Robert L.
APPLICANT: Petersen, Deanna M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acids and
TITLE OF INVENTION: Cancer Medicament Combination Therapy for the Treatment of
TITLE OF INVENTION: Cancer FILE REFERENCE: C1037/7017(HCL/MAT)
CURRENT PAPLICATION NUMBER: US/09/800,266A
CURRENT FILING DATE: 2001-03-05
PRIOR APPLICATION NUMBER: US 60/187,214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 146
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 86
LENGTH: 20
NUMBER OF SEQ ID NOS: 1
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Synthetic Sequence US-09-800-266A-86
                                                                                                                                                                                                                                                                           OTHER INFORMATION: CpG nucleotides US-09-917-222-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 rccarcacerrccrcacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                          TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-800-266A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
```

```
Sequence 90. Application US/09895007A

Factor No. US/0020165178A1

GENERAL INFORMATION:

APPLICANT: Schetter, Christian

APPLICANT: Betersen, Deanna M.

TITLE OF INVENTION: TREATMENT OF ANEMIA, THROMBOCYTOPENIA,

FILE REPERENCE: Clo41/7014 (AMS)

CURRENT APPLICATION NUMBER: US/09/895,007A

CURRENT PILING DATE: 2001-06-28

FRIOR FILING DATE: 2000-06-28

NUMBER OF SEQ ID NOS: 133

SOFTWARE: FastSEQ for Windows Version 3.0

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                       Sequence 86, Application US/09895007A

Sequence 86, Application US/09895007A

Patent No. US20020165178A1

GENERAL INFORMATION:

APPLICANT: Schetter, Christian

APPLICANT: Bratzler, Robert L.

APPLICANT: TILE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACIDS FOR THE

TITLE OF INVENTION: IRRATMENT OF ANEMIA, THROMBOCYTOPENIA, TILLE OF INVENTION INTERER: 2001-06-28

CURRENT APPLICATION NUMBER: US 60/214,368

PRIOR FILING DATE: 2000-06-28

NUMBER OF SEQ ID NOS: 133

SOSTWARE: FastSEQ for Windows Version 3.0
                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gape
                                                                                                                          .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                   100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 5.6; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 5.6; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , OTHER INFORMATION: Synthetic oligonucleotide US-09-895-007A-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Synthetic oligonucleotide US-09-895-007A-86
OTHER INFORMATION: Synthetic Sequence US-09-800-266A-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 rccardacerrecreacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20; Conservative
                                                                                                                          20; Conservative
                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
```

```
Sequence 560, Application US/0988326

Publication No. US20030026801A1

GENERAL INFORMATION:

APPLICANT: Weiner, George

APPLICANT: Weiner, George

TITLE OF INVENTION: Methods for Enhancing Antibody-Induced

TITLE OF INVENTION: Cell Lygis and Treating Cancer;

FILE REFERENCE: Clo39/7052 (AWS)

CURRENT APPLICATION NUMBER: US/09/888,326

CURRENT FILING DATE: 2001-06-22

PRIOR PILICATION NUMBER: US 60/213,346

PRIOR FILING DATE: 2000-06-22

NUMBER OF SEQ ID NOS: 848

SOFTWARE: FastSEQ for Windows Version 3.0

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 5.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature

LOCATION: (0)...(0)

7 OTHER INFORMATION: phosphorothioate backbone

US-09-888-326-560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
US-09-888-326-561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
US-09-888-326-562
                                                                        US-09-888-326-560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 90, Application US/09920313
; Bequence 90, Application US/09920313
; Publication No. UG20020198165A1
; GENERAL INFORMATION:
   APPLICANT: Bratzler, Robert L.
; APPLICANT: Petersen, Deanna M.
   TITLE OF INVENTION: Nucleic Acids for the Prevention and TITLE OF INVENTION: Treatment of Gastric Ulcers
   TITLE OF INVENTION: Treatment of Gastric Ulcers
   FILE REFERENCE: 1033/7/7019 (HCL/MAT)
   CURRENT FILING DATE: 2001-08-01
   PRIOR APPLICATION NUMBER: US 60/222,248
   PRIOR PELICATION NUMBER: US 60/222,248
   NUMBER OF SEQ ID NOS: 148
   SEQ ID NO 90
   SEQ ID NO 90
   LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 20; DB 3; Length 20; Pred. No. 5.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 20; DB 3; Length 20; illarity 100.0%; Pred. No. 5.6; Conservative 0; Mismatches 0: Indels
  Score 20; DB 3; Length 20; Pred. No. 5.6;
                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                      APPLICANT: Bratzler, Robert L.
APPLICANT: Bratzler, Robert L.
APPLICANT: Petersen, Deanna M.
TITLE OF INVENTION: Nucleic Acids for the Prevention
TITLE OF INVENTION: Treatment of Gastric Ulcers
FILE REPERENCE: C1037/7019 (HCL/MAT)
CURRENT APPLICATION NUMBER: US/09/920,313
CURRENT FILING DATE: 2001-08-01
PRIOR APPLICATION NUMBER: US 60/222,248
PRIOR FILING DATE: 2001-08-08
NUMBER OF SEQ ID NOS: 148
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 86
                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.0%; Score 20; DE Best Local Similarity 100.0%; Pred. No. 5.6 Matches 20; Conservative 0; Mismatches
Query Match
100.0%; Score 20; DE
Best Local Similarity 100.0%; Pred. No. 5.6
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Synthetic Sequence US-09-920-313-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                          Sequence 86, Application US/09920313
Publication No. US20020198165A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                        1 rccardacdriccrdacdrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 20, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-920-313-90
                                                                                                                                                                                                                                         US-09-920-313-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-920-313-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                              ò
                                                                                                                                        유
```

```
ö
  ö
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
  .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                           Sequence 561, Application US/0988326
| Publication No. US20030026801A1
| GENERAL INFORMATION:
| APPLICANT: Weiner George
| APPLICANT: Weiner George
| TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
| TITLE OF INVENTION: Methods for Enhancing Cancer
| TITLE OF INVENTION: Gell Lysis and Treating Cancer
| FILE REFERENCE: C1039/7052 (AWS)
| CURRENT APPLICATION NUMBER: US/09/888,326
| CURRENT FILING DATE: 2001-06-22
| PRIOR FILING DATE: 2000-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: Synthetic oligonucleotide US-09-888-326-561
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 848
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 561
LENGTH: 20
```

rccarcacerrccrcacerr 20

셤

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
CTHER INFORMATION: Synthetic oligonucleotide
COTHER INFORMATION: Synthetic oligonucleotide
NAME/ELST misc_feature
LOCATION: (0) ... (0)
COTHER INFORMATION: chimeric phosphorothioate/phosphodiester backbone
COTHER INFORMATION: with phosphorothioate at 5' and 3' ends
US-09-888-326-562
Sequence 562, Application US/0988326
| Publication No. US20030026801A1
| GENERAL INFORMATION:
| APPLICANT: Weiner, George
| APPLICANT: Weiner, George
| TITLE OF INVENTION: Methods for Enhancing Antibody-Induced
| TITLE OF INVENTION: Gell Lysis and Treating Cancer
| TITLE OF INVENTION: Gell Lysis and Treating Cancer
| TITLE OF INVENTION: Gell Lysis and Treating Cancer
| TITLE OF INVENTION: Gell Lysis and Treating Cancer
| FILE REFERENCE: C1039/7052 (AMS)
| FILE REFERENCE: C1039/7052 (AMS)
| FILE REFERENCE: C1039/7052 (AMS)
| FILE REFERENCE: 2001-06-22
| PRIOR APPLICATION NUMBER: US 60/213,346
| PRIOR APPLICATION NUMBER: US 60/213,346
| NUMBER OF SEQ ID NOS: 848
| SOFTWARE: FastSEQ for Windows Version 3.0
| FRO ID NO 562
| LENGTH: 20
| TYPE: DNA
| PRATTHER: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
```

Search completed: May 4, 2006, 09:01:07 Job time : 299.851 secs

g ઠે

1 TCCATGACGTTCCTGACGTT 20

This Page Blank (uspto)

Sequence Sequence Sequence Sequence Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence

10, Appl 10, Appl 10, Appl 10, Appl 10, Appl 11, Appl 12, Appl 13, Appl 14, Appl 16, Appl 17, Appl 18, Appl 19, Appl 19, Appl 10, Appl 11, Appl 11, Appl 11, Appl 12, Appl 13, Appl 14, Appl 16, Appl 17, Appl 18, Appl 19, Appl 19, Appl 19, Appl 10, Appl 11, Appl 11, Appl 11, Appl 12, Appl 13, Appl 14, Appl 16, Appl 17, Appl 18, Appl 19, Appl 19, Appl 10, Appl 11, Appl 11, Appl 11, Appl 12, Appl 13, Appl 14, Appl 16, Appl 17, Appl 18, Appl 19, Appl 19, Appl 19, Appl 10, Appl 11, Appl 11, Appl 11, Appl 11, Appl 12, Appl 13, Appl 14, Appl 15, Appl 16, Appl 17, Appl 17, Appl 18, Appl 18, Appl 19, Appl 19, Appl 19, Appl 19, Appl 10, Appl 10, Appl 11, Appl 11, Appl 11, Appl 11, Appl 12, Appl 13, Appl 14, Appl 16, Appl 17, Appl 18, Ap

Sequence (Sequence Sequence Se

Sequence Sequence Sequence

Sequence Sequence Sequence Sequence Sequence Sequence

Sequence

Sequence Sequence

Sequence

Perfect score:

Sequence:

OM nucleic

Run on:

Scoring table:

Minimum DB Maximum DB

Maximum

Database

```
THER INFORMATION: synthetic immunostimulatory oligonucleotide
100.0%; Score 20; DB 10; 100.0%; Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, Application US/10469561
; Sequence 5, Application US/10469561
; Publication No. US20050260216A1
; GENERAL INFORMATION:
; APPLICANT: Claire Ashman
; APPLICANT: James Scott Crowe
; APPLICANT: Jonathan Henry Ellis
; APPLICANT: Alan Perer Lewis
; TITLE OF INVENTION: VACCINE
; FILE REFERENCE: PG4355USW
; CURRENT APPLICATION NUMBER: US/10/469,561
; CURRENT PELING DATE: 2003-08-29
; NUMBER OF SEQ ID NOS: 25
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 5
; LEWOTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
US-10-619-279-10
Sequence 10, Application US/10619279
Publication No. US20050267057A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
    Query Match 100.
Best Local Similarity 100.
Matches 20; Conservative
                                                                     1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
1000.0
                                                                                                                                                                                                                                                              00000000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-10-469-561-5
                                                                                                                                                                                                                                                                                                                                               16.8
16.8
16.8
16.8
                                                                                                                                                                                                                      18.4
18.4
18.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 43, Appl
Sequence 10, Appl
Sequence 3, Appli
Sequence 3, Appli
Sequence 63, Appli
Sequence 63, Appli
Sequence 63, Appl
                                                                                             4, 2006, 08:17:52; Search time 456.437 Seconds
(without alignments)
178.449 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           number of results predicted by chance to have a in or equal to the score of the result being printed, analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, 1
Sequence 43,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5
Sequence 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 8
Sequence 1
Sequence 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                               Published Applications NA New:*

1: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq1:*
2: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*
3: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*
4: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*
5: /SIDS5/ptodata/2/pubpna/US08 NEW PUB.seq:*
6: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*
7: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*
8: /SIDS5/ptodata/2/pubpna/US09 NEW PUB.seq:*
9: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq:*
11: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq:*
11: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*
12: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*
13: /SIDS5/ptodata/2/pubpna/US10 NEW PUB.seq2:*
14: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq2:*
15: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*
16: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*
17: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*
18: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*
19: /SIDS5/ptodata/2/pubpna/US11 NEW PUB.seq3:*
                  GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-469-561-5
US-10-619-279-10
US-10-881-656-10
US-10-881-661-3
US-10-38-634-43
US-11-286-572-10
US-11-286-572-10
US-11-127-654-63
US-11-127-654-82
US-11-127-654-130
US-11-127-654-130
US-11-127-654-145
US-11-127-654-145
                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                 9306428 segs, 2036268586 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                     nucleic search, using sw model
                                                                                                                                                                                1 tecatgaegtteetgaegtt 20
                                                                                                                                                                                                                       Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of res
score greater than or equal to
and is derived by analysis of
                                                                                                                                                                                                                                                                                                       seq length: 0
seq length: 200000000
                                                                                                                                               US-10-789-758A-6
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTITY NUC
```

ö

Gaps

ô

Result

Length

```
US20060002928A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-10-382-822-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-533-634-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10, Application US/10435656

Publication No. US20050277604A1

General Information

APPLICANT: Kilne, Joel N.

APPLICANT: Kilne, Joel N.

APPLICANT: Kilne, Joel N.

APPLICANT: Kilnen, Dennis

APPLICANT: Kilnen, Dennis

APPLICANT: Alfred D.

TITLE REPERENCE: C1039/7048 (AMS)

CURRENT APPLICATION NUMBER: US/10/435,656

CURRENT FILING DATE: 1994-00-05

PRIOR PILICATION NUMBER: US 08/276,358

PRIOR PLICATION NUMBER: US 08/276,358

PRIOR PLICATION NUMBER: US 08/386,063

PRIOR PLICATION NUMBER: US 08/386,063

PRIOR PLING DATE: 1995-02-07

PRIOR PLING DATE: 1995-10-30

NUMBER OF SEQ ID NOS: 56

SEQ ID NO 10

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
APPLICANT: Krieg, Arthur M.

TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPRENCE: C1039/7023/HCL
CURRENT APPLICATION NUMBER: US/10/619,279
CURRENT PILING DATE: 2003-07-14
FRIOR APPLICATION NUMBER: US 08/960,774
FRIOR APPLICATION NUMBER: US 08/960,774
FRIOR PILING DATE: 1997-10-30
FRIOR FILING DATE: 1996-10-30
FRIOR FILING DATE: 1996-10-30
FRIOR FILING DATE: 1996-07-03
FRIOR FILING DATE: 1994-07-15
FRIOR RELING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20; DB 10; Length 20;
Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
100.0%; Score 20; DB 10; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.17;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ) OTHER INFORMATION: Synthetic Oligonucleotide US-10-619-279-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , OTHER INFORMATION: Synthetic oligonucleotide
US-10-435-656-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 100.0%; Best Local Similarity 100.0%; Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-435-656-10
                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
```

RESULT 4 US-10-881-661-3 ; Sequence 3, Application US/10881661

```
Sequence 43, Application US/10533634

Sequence 43, Application US/10533634

Sequence 43, Application No. US20060019239A1

GENERAL INFORMATION:
APPLICANT: THE UNITED STATES OF AMERICA AS REPRESENTED BY THE
APPLICANT: Thinman, Dennis M.
APPLICANT: Ivins, Bruce
APPLICANT: Ivins, Bruce
ITILE OF INVENTION: METHOD OF PREVENTING INFECTIONS FROM BIOTERRORISM AGENTS WITH
ITILE OF INVENTION: METHOD OF PREVENTING INFECTIONS FROM BIOTERRORISM AGENTS WITH
ITILE OF INVENTION: MANUNER: US/10/533,634

CURRENT APPLICATION NUMBER: PCT/US2003/034523

PRIOR FILING DATE: 2003-10-31

PRIOR APPLICATION NUMBER: US 60/422,964

PRIOR FILING DATE: 2002-11-01

NUMBER OF SEQ ID NOS: 199

SOFTWARE: Patentin version 3.2

SEQ ID NO 43

LENGTH: 20

LENGTH: 20

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
APPLICANT: Radhakrishnan, Suresh
APPLICANT: Radhakrishnan, Suresh
APPLICANT: Ijima, Koji
APPLICANT: Ijima, Koji
APPLICANT: Kita, Hirchito
TITLE OF INVENTION: Methods And Molecules For Modulating An Immune Response
FILE REFERENCE: 07039-520001
CURRENT APPLICATION NUMBER: 2004-06-30
NUMBER OF SEQ ID NOS: 5
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 20; DB 11; Length 20; 100.0%; Pred. No. 0.17; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
100.0%; Score 20; DB
Best Local Similarity 100.0%; Pred. No. 0.1
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: K oligonuclectide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 10, Application US/10382822; Publication No. US20060058251A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
, OTHER INFORMATION: Oligonucleotide
US-10-881-661-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 rccardacdrrccrdacdrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , APPLICANT: Krieg, Arthur M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
```

```
1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10, Application US/11296572
Fublication No. US20060089326A1
GENERAL INFORMATION:
APPLICANT: Krien, John No.
APPLICANT: Kline, John No.
APPLICANT: Kline, John No.
APPLICANT: Steinberg, Althur M.
PILE REFERENCE: C1039/7048 (AWS)
CURRENT APPLICATION NUMBER: US/09/818,918
PRIOR FILING DATE: 2001-03-27
PRIOR PLING DATE: 2001-03-27
PRIOR PLING DATE: 1994-07-15
PRIOR PLING DATE: 1994-07-15
PRIOR PLING DATE: 1996-10-30
NUMBER OF SEQ ID NOS: 56
SOFTWARE: FREESEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 100.0%; Score 20; DB 14; Length 20; Best Local Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 100.0%; Score 20; DB 12; Length 20; Best Local Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Indels
APPLICANT: Klinman, Dennis
APPLICANT: Steinberg, Alfred D.
TITLE OF INVENTION: Methods for Treating and Preventing;
TITLE OF INVENTION: Methods for Treating and Preventing;
TITLE OF INVENTION: Methods bisease
FILE REFERENCE: C01039.70062.US
CURRENT APPLICATION UNMBER: US/0/382,822
CURRENT FILING DATE: 2003-03-06
PRIOR FILING DATE: 2000-07-31
PRIOR FILING DATE: 1990-10-30
PRIOR FILING DATE: 1997-10-30
PRIOR PILING DATE: 1996-10-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Synthetic oligonucleotide US-11-296-572-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ) OTHER INFORMATION: Synthetic Oligonucleotide US-10-382-822-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-11-296-572-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 10
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
WESOUL SECOND TO SECOND SECOND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Hoerr, Ingmar
APPLICANT: Won Der Mulbe, Florian
APPLICANT: Won Der Mulbe, Florian
APPLICANT: Pascolo, Steve
TITLE OF INVENTION: Immunstimulation by chemically modified RNA
FILE REFERENCE: Curevac GmbH (2793-1-002)
CURRENT APPLICATION NUMBER: US/11/025,858
CURRENT FILING DATE: 2004-12-28
PRIOR FILING DATE: 2003-07-03
PRIOR FILING DATE: 2003-07-03
PRIOR FILING DATE: 2002-07-03
NUMBER OF SEQ ID NOS: 8
SOFTWARE: Patentin version 3.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 20; DB 17; Length 20; 100.0%; Pred. No. 0.17; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 65.0%; Pred. No. 0.17;
Matches 13; Conservative 7; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; FEATURE:
; OTHER INFORMATION: synthetic oligonucleotide, CpG RNA 1826
US-11-025-858-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: synthetic oligonucleotide, CpG DNA 1826 US-11-025-858-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 7, Application US/11025858
; Publication No. US20050250723A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 100.
Matches 20; Conservative
```

```
Sequence 145, Application US/11127654

Sequence 145, Application No. US20050250726A1

Bublication No. US20050250726A1

GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: INFLAMMATORY DISEASE
FILE REPRENCE: C1039.70060US01

CURRENT APPLICATION NUMBER: US/11/127,654

CURRENT FILING DATE: 2005-05-12

PRIOR FILING DATE: 2002-03-29

PRIOR FILING DATE: 2001-03-29

PRIOR FILING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFTHARE: PatentIn version 3.2

SEQ ID NO 145

LENGTHE: 2001-03-29

LENGTHE: 2001-03-29
                                                                                                                                                                                                                                                              APPLICANT: Krieg, Arthur M.
APPLICANT: Berg Daniel J.
TITLE OF INVENTION: IMMUNOSITY DISEASES
FILE REFERENCE: C1039,70060US01
CURRENT APPLICATION NUMBER: US,11/127,654
CURRENT FILING DATE: 2005-05-12
PRIOR APPLICATION NUMBER: US,10/112,653
PRIOR PILING DATE: 2001-03-29
PRIOR PILING DATE: 2001-03-29
PRIOR FILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SEQ ID NOS: 1040
SEQ ID NO 130
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 20; DB 17; Length 20; 100.0%; Pred. No. 0.17; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 20; DB 17;
100.0%; Pred. No. 0.17;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ) OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-130
                                                                                                                                                                                       ; Sequence 130, Application US/11127654; Publication No. US20050250726A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 rccardacerrccrdacerr 20
                                                              1 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
US-11-127-654-145
                                                                                                                                                                     US-11-127-654-130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
             ð
                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
RESULT 10

US-11-127-654-63

US-11-127-654-63

Sequence 63, Application US/11127654

Fublication No. US20050250726A1

GENERAL INPORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: MANUNOSTIMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC TITLE OF INVENTION: INPLAMMATORY DISEASES
FILE REPERENCE: Cl039,70060US01

CURRENT APPLICATION NUMBER: US/11/127,654

CURRENT PILING DATE: 2005-05-12

PRIOR FILING DATE: 2002-03-29

PRIOR PELING DATE: 2001-03-29

PRIOR PELING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFTWARE PREENTIN VERSION 3.2

SEQ ID NO 63

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Krieg, Arthur M.
APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: IMMUNSTIMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC TITLE OF INVENTION: IMMUNSTIMULATORY DISEASES
FILE REFERENCE: C1039.70060US01
CURRENT PELLING DATE: 2005-05-12
PRIOR PILLING DATE: 2002-03-29
PRIOR FILING DATE: 2002-03-29
PRIOR FILING DATE: 2001-03-29
PRIOR FILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SSGTWARE: PatentIn version 3.2
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
100.0%; Score 20; DB 17; Length 20;
Best Local Similarity 100.0%; Pred. No. 0.17;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20; DB 17; Length 20;
Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
100.0%; Score 20; DE
Best Local Similarity 100.0%; Pred. No. 0.1
Matches 20; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 82, Application US/11127654
Publication No. US20050250726A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 récardacerrécidacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: modified base
LOCATION: (17)..(17)
OTHER INFORMATION: m5c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: modified base
LOCATION: (8)..(8)
OTHER INFORMATION: m5c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

```
Job time : 457.437 secs
```

```
Sequence 222, Application US/11127654

| Publication No. US20050250726A1
| Publication No. US20050250726A1
| GENERAL INFORMATION:
| APPLICANT: Krieg, Arthur M. |
| APPLICANT: Berg, Daniel J. |
| TITLE OF INVENTION: INFUNENTINI INFUNEN
                                                                                                                                                                                             APPLICANT: Krieg Arthur M.
APPLICANT: Krieg Daniel J.
TITLE OP INVENTION: IMMUNOSTHULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC TITLE OP INVENTION: IMMUNOSTHULATORY DISEASES FILE REFERENCE: CL039.70060U301
CURRENT APPLICATION NUMBER: US/11/127,654
PRIOR APPLICATION NUMBER: US/11/12,653
PRIOR FILING DATE: 2002-03-29
PRIOR FILING DATE: 2002-03-29
PRIOR FILING DATE: 2001-03-29
PRIOR FILING DATE: 2001-03-29
PRIOR FILING DATE: 2001-03-29
SEQ ID NOS: 1040
SSCTUARE: PatentIn version 3.2
SEQ ID NO 146
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 100.0%; Score 20; DB 17; Length 20; Best Local Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 100.0%; Score 20; DB 17; Length 20; Best Local Similarity 100.0%; Pred. No. 0.17; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATIÓN: Synthetic oligonucleotide
US-11-127-654-146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-292
                                                                                  Sequence 146, Application US/11127654; Publication No. US20050250726A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGITCCTGACGIT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Artificial sequence
RESULT 14
US-11-127-654-146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
US-11-127-654-292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
```

Search completed: May 4, 2006, 10:07:24

This Page Blank (uspto)

Scoring table:

Searched:

Minimum DB Maximum DB

Database

Perfect score:

Sequence:

OM nucleic

Run on:

```
AJ749922 Mycobacte
AJ749923 Mycobacte
AJ749929 Mycobacte
AJ749926 Mycobacte
AJ749926 Mycobacte
AJ749929 Mycobacte
AJ749929 Mycobacte
AJ749929 Mycobacte
AJ749929 Mycobacte
AJ749929 Mycobacte
AJ749929 Mycobacte
AF547813 Mycobacte
AF547814 Mycobacte
AF547886 Mycobacteri
U55825 Mycobacteri
AF645 Sequence
AK773940 Sequence
AK773940 Sequence
                                                                                                                                                                                                                                                                                                                                                            PAT 24-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 17-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 54; DB 6; Length 54; 100.0%; Pred. No. 1.7e-07; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCGATGACGTCGCCGGTGACGCCACCACGTCGTCGTTTTGTCGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vaccines
Patent: WO 0100231-A 7 04-JAN-2001;
SMITHKLINE BEECHAM BIOLOGICALS S.A. (BE)
Location/Qualifiers
1. 54
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
/note="oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                         Sequence 7 from Patent WO0100231. AX063581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX088935 54 bp
Sequence 7 from Patent W00100232.
AX088935 AX088935.1 GI:13397693
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cohen, J., Garcon, N. and Voss, G.
                                                 AJ749925
AJ749928
AJ749929
AJ749929
AJ749929
AJ749930
AJ749930
AJ749930
AF547813
AF547813
AF547884
AF547886
                                                                                                                                                                                                                                                      A46454
CQ816174
AR266836
                                                                                                                                                                                                                                                                                                                                                                                            AX063581.1 GI:12541305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54; Conservative
Query Match
Best Local Similarity
Matches 54; Conserv
         LOCUS DEFINITION S
ACCESSION A
VERSION A
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                       RESULT 1
AX063581
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 2
AX088935
                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX063581 Sequence
AX088935 Sequence
E04644 Synthetic n
E04708 Synthetic n
AX105264 Sequence
A36735 Sequence
A36735 Sequence
A36735 Sequence
A36736 Sequence
AR066279 Sequence
I33087 Sequence
I3308 Sequence
I3308 Sequence
I3309 Sequence
I3309 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A30753 Mycobacteri
876635 65 kda anti
AR066299 Sequence
133108 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A30752 Mycobacteri
                                                                      4, 2006, 02:22:43 ; Search time 1253.79 Seconds (without alignments) 2448.208 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                      1 accgatgacgtcgccggtga......cgtttgtcgttttgtcgtt
            5.1.7
Biocceleration Ltd.
                                                                                                                                                                                        5883141 seqs, 28421725653 residues
                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
            version 9
- 2006 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          E04644
E04708
E04708
A36735
A36735
A36736
A36736
E13308
E133109
ARC66300
E133109
A30753
A30753
A30753
A30753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX063581
AX088935
                                                                                                                                                          IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
            GenCore
Copyright (c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ΩI
                                                                                                                                                                                                                                   seq length: 0
seq length: 200000000
                                                                                                              US-10-789-758A-7
54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   四
                                                                                                                                                                                                                                                                                                                    9b ba: *
9b in: *
9b om: *
9b om: *
9b om: *
9b pr: *
9b pr: *
9b pr: *
9b w: *
9b w: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     268
268
268
268
268
268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 343
350
350
                                                                                                                                                                                                                                                                                                           GenEmb1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55:
47:
110:
111:
14:
                                                                        May
```

ö

U

Score

Result Š

```
AX105264.1 GI:13921414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  control
                                                                                                        E04708.1 GI:2172904
JP 1992352724-A/65.
synthetic construct
synthetic construct
                                                                           Synthetic nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX105264
                                                                                                                                                                                                                                                                                                                                                                                     ETSURO,
PI YAN
PC A61
CC Str
CC top
FH Key
FH Key
                                                                        DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 5
AX105264
LOCUS
                                                                                                                                                                                                    AUTHORS
                             RESULT 4
E04708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                     PAT 29-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KURAMOTO
                                                                                                                                                                                                                                                                                                                                                                            busest linear PAT 29-SEP-1997 Synthetic nucleotide with (GACGTC) structure, having immunomodulation activities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic construct
synthetic construct
construct
construct
synthetic construct
construct
construct
construct
synthetic construct
synthetic construct
construct
I (bases 1 to 45)
Tokunaga,T., Kataoka,T., Yamamoto,S., Kuramoto,E., Yano,O.,
Makino,T. and Shimada,S.
IMMUNOMODULATION TYPE THERAPEUTIC AGENT
Recent: JP 199135-174-A 1 07-DEC-1992;
MITSUI TOATSU CHEM INC
CO Artificial sequence; Genes.
PN JP 1992352724-A/1
PD 07-DEC-1992
PF 18-JUL-1991
PP 18-JUL-1991 JP 1991178058
PR 27-JUL-1990 JP 199778
PI TOKUNAGA TORU, KATAOKA TETSURO, YAMAMOTO SABURO, PI KURA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                              54
                                                                                                                                                                                                                                                                                                           54
                                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTTTTGTCGTTTTTGTCGTTT
                                                                                                                                                                                                                                                                                              1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTCTTTTGTCGTTTTGTCGTT
                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.9%; Score 31.8; DB 6; Length 45; ilarity 94.3%; Pred. No. 4.3; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                   Length 54;
                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YANO OSAMU, MAKINO TADASHI, SHIMADA SHIZUO
AGIK11/70,AGIK31/70,AGIK31/70//C07H21/04;
Strandedness: Single;
topology: Linear;
hypothetical: No;
                                                                                                                                                                      /note="CpG containing oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 with (GACGTC) structure
Location/Qualifiers
                                                                                                                                                                                                                 Query Match
100.0%; Score 54; DB 6; I
Best Local Similarity 100.0%; Pred. No. 1.7e-07;
Matches 54; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATGACGTCGCCGGTGACGCACCACGACGGC 35
                                                                                                          1 .54
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers

    .45
    /organism="synthetic construct"
/mol_type="genomic DNA"
    /db_xref="taxon:32630"

other sequences, artificial sequences.
                                                        Patent: WO 0100232-A 7 04-JAN-2001;
SmithKline Beecham Biologics SA (BE)
Location/Qualifiers
                             Garcon, N. and Voss, G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   E04644.1 GI:2172840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             anti-sense: No;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JP 1992352724-A/1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 33; Conserva
                                              Vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
              REFERENCE
                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                          RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                           8
```

```
Interferon
Patent: WO 0122990-A 163 05-APR-2001;
Coley Pharmaceutical Group, Inc. (US); UNIVERSITY OF IOWA RESEARCH
FOUNDATION (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KURAMOTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 30-APR-2001
PAT 29-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                닲
                                                                                                                                                      S Tokunaga T.: Kataoka,T.: Yamamoto,S.; Kuramoto,E.; Yano,O.;

R 1 (bases 1 to 45)
S Tokunaga,T.: Kataoka,T.; Yamamoto,S.; Kuramoto,E.; Yano,O.;
Makino,T. and Shimada,S.
IMMUNOMODULATION TYPE THERAPEUTIC AGENT
L Patent: JP 1992352724-A 65 07-DEC-1992;
MITSUI TOATSU CHEM INC
OC Artificial gene
OC Artificial sequence; Genes.
PN JP 1992352724-A/65
PD 07-DEC-1992
PP 18-JUL-1991 JP 1991178058
PR 27-JUL-1990 JP 90P 197778
PI TOKUNAGA TORU, KATAOKA TETSURO, YAMAMOTO SABURO, PI KURA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .45
/note='synthetic nucleotide prepared as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hartmann, G.D., Bratzler, R.L. and Krieg, A.U.
Methods related to immunostimulatory nucleic acid-induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YANO OSAMU MAKINO TADASHI, SHIMADA SHIZUO AGIKA1/70, AGIK31/70, AGIK31/70, AGIK31/70, AGIK31/70, AGIK31/70, CO7H21/04; BITRANGGOGGS: Double; Copology: Linear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 58.9%; Score 31.8; DB 6; Best Local Similarity 94.3%; Pred. No. 4.3; Matches 33; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1..45
/organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ACCGATGACGTCGCCGGTGACGCCACCACGACGGC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .45
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX105264 45 bp 3
Sequence 163 from Patent WO0122990.
  ď
    42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
```

ö

Gaps

```
PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                     1 (bases 1 to 268)
Mabilat, C. and Pechere, J.-C.
DNA fragments of mycobacteria, amplification primers hybridization
probes, reagents and method for the detection of mycobacteria
Patent: US 5849901-A 1 15-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 268)
Mabilat, C. and Pechere, J.-C.
Mabilat, C. and Pechere, J.-C.
DNA fragments of mycobacteria, amplification primers hybridization probes, reagents and method for the detection of mycobacteria Patent: US 5849901-A 2 15-DEC-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                             ö
                            Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6; Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                ;
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
                                                             .;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29 ACCGATGACGTCGCCGGTGACGCACCACGACGGC 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                          63
                           Score 31.8; DB
Pred. No. 4.3;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 31.8; DB
Pred. No. 4.3;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29 ACCGATGACGTCGCCGGTGACGCACCACCACGACGC
                                                                                                              29 ACCGATGACGTCGCCGGTGACGCACCACCACGACGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC
                                                                                             1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 31.8; DE
Pred. No. 4.3;
0; Mismatches

    .268
/organism="unknown"
/mol_type="unassigned DNA"

                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="unknown" / mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                268 bp
Sequence 2 from patent US 5849901.
AR066279
AR066279.1 GI:5996495
                                                                                                                                                                                                       AR066278 268 bp
Sequence 1 from patent US 5849901.
AR066278
                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                       AR066278.1 GI:5996494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58.9%;
94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 94.3%;
Matches 33; Conservative C
                           ch 58.9%;
1 Similarity 94.3%;
33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33; Conservative
                                                                                                                                                                                                                                                                                                                       Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unclassified.
                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 33; Conserv
                                                                                                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                           Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                       DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 10
133087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
                                                                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
AR066279
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                         RESULT 8
AR066278
                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                         LOCUS
                                                                                             ð
                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . . .
                                                                             ö
                                                                                                                                                                                                                          PAT 05-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 05-MAR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium; Mycobacterium tuberculosis complex.

1 (bases 1 to 268)
Mabilat, C. and Pechere, J.
Mycobacteria DNA fragments, amplification primers, hybridization probes, raagents and detection process of mycobacteria Patent: BP 0584023-A 2 23-FBB-1994;
                                                                                                                                                                                                                                                                                                                                   Gorganian Actinobacteria, Actinobacteridae, Actinomycetales, Corynebacterineae; Mycobacteriaceae, Mycobacterium, Mycobacterium tuberculosis complex.

1 (Dases 1 to 268)
Mabilat,C. and Pechere,J.
Mycobacteria DNA fragments, amplification primers, hybridization probacteria DNA fragments and detection process of mycobacteria DNA fragments and detection process of mycobacteria of Patent: EP 0584023-A 1 23-FEB-1994;
BIO MENIEUX (FR)
Other publication CA 2103933 940213
Other publication FR 2694754 940218.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 268;
                                               Length 45;
                                                                                                                                                                                                                          linear
                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.268
Corganism="Mycobacterium microti"
/mol type="unassigned DNA"
/db_kref="taxon:1806"
/note="Synthetic Oligonucleotide"
                                                                          2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 58.9%; Score 31.8; DB 6; Best Local Similarity 94.3%; Pred. No. 4.3; Matches 33; Conservative 0; Mismatches 2;
                                             9
                                                                                                                               1 ACCGATGACGTCGCCGGTGACGGCACCACGACGGC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mycobacterium bovis"
/mol_type="unassigned DNA"
/db_xref="taxon:1765"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29 ACCGATGACGTCGCCGGTGACGCACCACGACGGC 63
                                                                                                            1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                             Query Match
Best Local Similarity 94.3%; Pred. No. 4.3;
Matches 33; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Other publication CA 2103933 940213
Other publication FR 2694754 940218.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  268 bp
Sequence 2 from Patent BP0584023.
A36736
                                                                                                                                                                                                                       268 bp
Sequence 1 from Patent EP0584023.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mycobacterium microti
Mycobacterium microti
                                                                                                                                                                                                                                                       A36735
A36735.1 GI:2294002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A36736.1 GI:2294003
                                                                                                                                                                                                                                                                                                   Mycobacterium bovis
                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                       LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 7
                                                                                                                                                                                          RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A36736
LOCUS
                                                                                                                                                                                                         A36735
                                                                                                          ò
                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

ö

Gaps

ö

Gaps

ö

```
A342 bp DNA linear PAT 24-JUL-1996
Mycobacterial sp. DNA for 65 kDa-like mycobacterial antigen
(partial).
                                                                                                                                                                                                                                                            PAT 06-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUCLECTIDIC SEQUENCES OF ACTINOMYCETALES, APPLICATIONS TO THE SYNTHESIS ON DETECTION OF NUCLEIC ACIDS, PRODUCTS OF EXPRESSION SUCH SEQUENCES AND APPLICATION AS IMMUNOGENIC COMPOSITIONS PATENT: NO 9012875-A 6 01-NOV-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                              Unclassified.
1 (Dases 1 to 314)
Mabilat,c.
DNA fragments, probes and amplification primers of the 65 kD antigen of mycobacteria
Patent: US 5589585.A 23
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bacteria, Actinobacteria, Actinobacteridae, Actinomycetales,
Corynebacterineae, Mycobacteriaceae.
1 (bases 1 to 342)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 342;
                                                                                        Length 314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2; Indels
                                                                                                                                                                                                                                                            linear
                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . 9
                                                                                                                                                     35
                                                                                                                                                                                52 Acceareacereceereaceeraceaceaeee 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52 ACCGATGACGTCGCCGGTGACGGCACCACGACGGC 86
                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 31.8; DB Pred. No. 4.3; 0; Mismatches
                                                                                        Query Match 58.9%; Score 31.8; DB Best Local Similarity 94.3%; Pred. No. 4.3; Matches 33; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch 58.9%; Score 31.8; DB 1 Similarity 94.3%; Pred. No. 4.3; 33; Conservative 0; Mismatches
                                                                                                                                                                                                                                                           314 bp E
Sequence 23 from patent US 5589585.
133109

    .342
    /organism="Mycobacterium"
/mol_type="unassigned DNA"
/db_xref="taxon:1763"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .314
/organisme"unknown"
/mol_type="unassigned DNA"
                                             /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                  1. .314
/organism="unknown"
   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 58.9%;
Best Local Similarity 94.3%;
Matches 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A30752
A30752.1 GI:1567052
                                                                                                                                                                                                                                                                                                      133109.1 GI:1823900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 33; Conserv
                                                                                                                                                                                                                                                                                                                                     Jnknown
                                                                                                                                                                                                                                                                                                                                                     Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bource
                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 14
A30752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                             RESULT 13
    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                              ORIGIN
                                                                                                                                                                                                                                              133109
                                                                                                                                                       ò
                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 06-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 29-SEP-1999
      PAT 06-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown:
Unclassified.
Unclassified.
1 (bases 1 to 314)
Mabilar,C. and Pechere,J.-C.
Mabilar,C. and Pechere,J.-C.
Mabilar,C. and Mycobacteria, amplification primers hybridization probes, reagents and method for the detection of mycobacteria patent: US 5849901-A 23 15-DEC-1998;
                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown:
Unclassified.
Unclassified.
1 (bases 1 to 268)
1 (bases 2 to 268)
Mabilat.C. and Pechere, J.-C.
DNA fragments, probes and amplification primers of the 65 kD antigen of mycobacteria antigen of mycobacteria Patent: US 5589585-A 2 31-DEC-1996;
Location/Qualifiers
                                                                                                                                                  DNA fragments, probes and amplification primers of the 65 kD antigen of mycobacteria Patent: US 5589585-A 1 31-DEC-1996; Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ó,
                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                          Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6; Length 268;
      linear
                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                               63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                   1 ACCOATGACGTCGCCGGTGACGCCACCTCGTC 35
      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                       Score 31.8; DB
Pred. No. 4.3;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                     29 ACCGATGACGTCGCCGGTGACGCCACCACGACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29 Acceandacerceccedraacecaccaceacec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 31.8; DB Pred. No. 4.3; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR066300 314 bp 1
Sequence 23 from patent US 5849901.
AR066300. GI:5996516
                                                                                                                                                                                                                                           /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                    268 bp
Sequence 2 from patent US 5589585.
133088
268 bp
Sequence 1 from patent US 5589585.
133087
                                                                                                        Unclassified.
1 (bases 1 to 268)
Mabilat, C. and Pechere, J.-C.
                                                                                                                                                                                                                1. .268
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 94.3%;
Matches 33; Conservative (
                                                                                                                                                                                                                                                                                        ch
il Similarity 94.3%;
33; Conservative
                                              I33087.1 GI:1823878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I33088.1 GI:1823879
                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                             Unknown
                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
AR066300
                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
133088
                                                                                                                                       AUTHORS
                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                  FEATURES
                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
```

ð 셤 ö

ö

Ö

유

ઠે

```
A30753 342 bp DNA linear PAT 24-JUL-1996 Mycobacterial sp. DNA for 65 kDa-like mycobacterial antigen (partial).
A30753 A30753.1 GI:1567053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                            NUCLEOTIDIC SEQUENCES OF ACTINOMYCETALES, APPLICATIONS TO THE SYNTHESIS OR DETECTION OF NUCLEIC ACIDS, PRODUCTS OF EXPRESSION OF SUCH SEQUENCES AND APPLICATION AS IMMUNOGENIC COMPOSITIONS PACENT: WO 9012875-A 7 01-NOV-1990; Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                   Mycobacterium
Mycobacterium
Bacteria, Actinobacteria, Actinobacteridae, Actinomycetales,
Corymebacterineae; Mycobacteriaceae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 58.9%; Score 31.8; DB 6; Length 342; Best Local Similarity 94.3%; Pred. No. 4.3; Matches 33; Conservative 0; Mismatches 2; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  297 ACCGATGACGTCGCCGGTGACGCACCACGACGGC 263
1 ACCGATGACGTCGCCGGTGACGCCACGTCGTC 35

    .342
    /organism="Mycobacterium"
/mol_type="unassigned DNA"
/db_xref="taxon:1763"

                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                     RESULT 15
A30753/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                             Bource
                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

Search completed: May 4, 2006, 03:51:44 Job time: 1257.79 secs

셤

This Page Blank (uspto)

1

```
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
```

nucleic search, using sw model OM nucleic

4, 2006, 01:23:12 ; Search time 406.241 Seconds (without alignments) 885.910 Million cell updates/sec May Run on:

US-10-789-758A-7 54 Title: Perfect score:

1 accgatgacgtcgccggtga......cgttttgtcgttttgtcgtt Sequence:

54

Scoring table:

4996997 seqs, 3332346308 residues IDENTITY NUC Gapop 10.0 , Gapext 1.0 Searched:

9993994 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

N Geneseq 21:*
: geneseqn1980s:*
: geneseqn1990s:* Database :

genesequ2000s:* genesequ2001bs:* genesequ2001bs:* genesequ2002s:* genesequ2003as:* genesequ2003as:* geneseqn2003cs:* geneseqn2003ds:* geneseqn2004as: geneseqn2004bs: geneseqn2005s:* Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description		Aaf27753 P. falcip	Aag20869 Immunosti	Aag20698 Immunosti	Aaf98882 IFN-1 ind	Aag57762 Mycobacte	Aag57761 Mycobacte	Aaq06507 Encodes p	Acf04267 M bovis h	Acf04273 M microti	Acf04268 M bovis B	Acf04263 M african	Acf04306 M tubercu	Aaf25022 Nucleotid	Adw23618 HSP65 DNA	Aca38272 Prokaryot	Adr12623 Gene vacc	Aah51969 Mycobacte	Aaf25002 Nucleotid	Aca40326 Prokaryot
ID	•	AAF27753	AAQ20869	AAQ20698	AAF98882	AAQ57762	AAQ57761	AAQ06507	ACF04267	ACF04273	ACF04268	ACF04263	ACF04306	AAF25022	3 ADW23618	ACA38272	3 ADR12623	AAH51969	AAF25002	ACA40326
* Query Match Length DB		54 5	45 2	45 2	45 4	268 2	268 2	342 2	604 9	604 9	604 9	604 9	604 9	888 5	1496 1	1620 8	1620 1	1623 4	1623 5	1623 8
Query Match		100.0	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
Score		54	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
Result No.		-	7	m	4	S	9	7	æ	თ	10	11	12	13	14	15	16	17	18	19

Adn11336 Chaperoni	Acc49833 Human rec	Adx05272 HSP65-MUC	Adk68629 HSP65-MUC	Acc49834 Human rec	Aaf25012 Nucleotid	Aaf25019 Nucleotid	Adw23606 Hepatits	Adn00588 BCG vacci	Adk72374 BCG-HER-2	Abs54448 BCG Hsp65	Abs54447 BCG Hsp65	Abs54449 BCG Hsp65	Abs54446 His tagge	Aaf25014 Nucleotid	Aan81768 Sequence	Aan80222 Seguence	Aav05708 Mycobacte	Aba99141 hsp65 enc	Abx09143 Mycobacte	Continuation (6 of	Continuation (6 of	Aah46030 BCG deriv	Aag57763 Mycobacte	Acf04300 M simiae	Acf04279 M genaven
ADN11336	ACC49833	ADX05272	ADK68629	ACC49834	AAF25012	AAF25019	ADW23606	ADN00588	ADK72374	ABS54448	ABS54447	ABS54449	ABS54446	AAF25014	AAN81768	AAN80222	AAV05708	ABA99141	ABX09143	AA199682 05	AA199683 05	AAH46030	AAQ57763	ACF04300	ACF04279
12	æ	14	10	æ	Ŋ	ഹ	13	12	12	ø	9	9	9	'n	_	-	7	9	9	4	4	4	~	σ	σ
1623	1752	1761	1800	1914	1920	1947	1965	1980	2016	2073	2130	2175	2241	2847	4260	4380	4380	4380	86114	110000	110000	45	268	604	604
58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	55.9	55.9	55.9	55.9
31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	30.2	30.2	30.2	30.2
20	21	22	23	24	25	56	27	28	59	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

AAF27753 standard; DNA; 54 BP. (first entry) 03-APR-2001 AAF27753; RESULT 1 **AAF**27753

P. falciparum vaccine CpG oligonucleotide WD1007.

Plasmodium falciparum; malaria; CpG oligonucleotide; vaccine; sporozoite;

Unidentified.

WO200100231-A2.

04-JAN-2001.

23-JUN-2000; 2000WO-EP005841.

99GB-00015204. 29-JUN-1999; (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.

Cohen J, Garcon N, Voss G;

WPI; 2001-112392/12.

New vaccine formulation, useful for preventing and treating plasmodium infection in a patient, comprises malaria antigen and immunostimulatory CpG oligonucleotide.

Claim 8; Page 16; 22pp; English.

The present invention describes a vaccine comprising a malaria antigen and an immunostimulatory CpG oligonucleotide. This is useful in the prevention and treatment of malaria caused by Plasmodium falciparum infection

Sequence 54 BP; 6 A; 15 C; 16 G; 17 T; 0 U; 0 Other;

AAQ20869

RESULT 2

유 ઠે

```
This single-stranded oligonucleotide is one example of an immunostimulatory sequence containing a palindrome. It increases mouse NK cell activity significantly more strongly than a control 45mer with no palindromic sequence. A fragment corresponding to nucleotides 1-30 of this sequence (i.e. contg. the palindrome) had a stronger effect on augmenting NK cell activity than nucleotides 16-45 fragment (i.e. lacking the palindrome). A fragment with nucleotides 16-45 fragment (i.e. lacking T(I) were inverted (i.e. T(10), (3(11) - n opalindrome) had a weaker effect on increasing NK cell activity than the unchanged 1-30 sequence. The full-length 45mer containing the palindrome also induces CSF and has
                                                                                                                                                                                                                                                                                   complementary strand sequence is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunostimulants contg. palindromic DNA - enhance interferon, macrophage activating factor and colony stimulating factor and promote lymphocyte
                                                                                                                                 natural killer cell; NK; immunodeficiency; autoimmune disease; CSF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Length 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IFN-1 inducing protein cDNA fragment BCG-A4 SEQ ID NO: 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tokunaga T, Kataoka T, Yamamoto S, Kuramoto E, Yano O,
Makino T;
                                                                                               Immunostimulatory oligonucleotide #1 contg. palindrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 45 BP; 8 A; 17 C; 15 G; 5 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 Accearcacercecreareacecaceacece 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 31.8; DB 2
Pred. No. 0.061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                    /*tag= a
/note= "palindrome, i.e.
identical reading 5'-3'"
                                                                                                                                                                                                                              location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 4; Page 22; 45pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MITK ) MITSUI TOATSU CHEM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                            90JP-00197778.
                                                                                                                                                                                                                                                                                                                                                                                                                       90JP-00197778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 58.9%;
Best Local Similarity 94.3%;
Matches 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   45
                                                         (first entry)
                                                                                                                                                                                                                                                  7. .12
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF98882 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               anti-tumour activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1992-034272/05.
                                                                                                                                                      anti-tumour; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-JUL-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                         27-JUL-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-JUN-2001
                                                                                                                                                                                                                                                  misc_feature
                                                       11-MAY-1992
                                                                                                                                                                                                                                                                                                                                                                                     29-JAN-1992
                                                                                                                                                                                                                                                                                                                                               EP468520-A
                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF98882;
                     AAQ20698;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF98882
 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EXEXEXEX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This double-stranded oligonucleotide is one example of an immunostimulatory sequence containing a palindrome. It increases mouse NK cell activity. There was little difference between the immunostimulatory activity of the double-stranded and single-stranded version of this activity of the double-stranded and single-stranded version of this acquence (see AAQ20698 for ss), e.g. NK cell activity is 47.5 (plus/minus 3.7) in the presence of 100 microcy/ul of the de-oligo, 44.0 (plus/minus 2.1) for the ss-oligo and 14.2 (plus/minus 0.5) for the control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "palindrome, i.e. complementary strand sequence is identical reading 5'-3'"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Immunostimulants contg. palindromic DNA - enhance interferon, macrophage activating factor and colony stimulating factor and promote lymphocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shimada
                                                                                                                                                                                                                                                                                                                                                                 natural killer cell; NK; immunodeficiency; autoimmune disease; CSF;
                                                                           54
                                                                                                               54
                                                                                                                 1 Accentacerceccedraceccecacercercerrrrercerrrrer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ó
                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2; Length 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yano O,
 Length 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                       Indels
                                                                           1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTCGTTTTGTCGTTT
                                                                                                                                                                                                                                                                                                                           Immunostimulatory oligonucleotide #24 contg. palindrome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 45 BP; 8 A; 17 C; 15 G; 5 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kuramoto E,
Query Match
100.0%; Score 54; DB 5; L
Best Local Similarity 100.0%; Pred. No. 5.1e-10;
Matches 54; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCGATGACGTCGCCGGTGACGCACCACGACGGC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 31.8; DB 2
Pred. No. 0.061;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yamamoto S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 4; Page 36; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MITK ) MITSUI TOATSU CHEM INC.
                                                                                                                                                                                                              AAQ20869 standard; DNA; 45 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90JP-00197778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 58.9%;
1 Similarity 94.3%;
33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90JP-00197778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kataoka T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1992-034272/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 33; Conserv
                                                                                                                                                                                                                                                                                                                                                                                   anti-tumour; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       proliferation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Key
misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-JUL-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-JUL-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tokunaga T,
Makino T;
                                                                                                                                                                                                                                                                                       11-MAY-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP468520-A.
                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
```

Makino

Shimada S;

ö

Gaps

ö

Indels

Immunostimulatory nucleic acid; ISNA; human; interferon alpha; IFN-alpha;

AAQ20698 standard; DNA; 45

RESULT 3 AAQ20698 ID AAQ2

g ઠે

ö

Gaps

ö

```
The region corresponding to nucleotides 438-751 encoding the M.tuberculosis 65kD antigen is highly conserved among mycobacteria. DNA tragments having at least 70 per cent homology to this region and to the corresponding region from other species (e.g. M.bovis - see AAQ57761) are claimed. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                            The region corresponding to nucleotides 438-751 encoding the M.tuberculosis 65kD antigen is highly conserved among mycobacteria. DNA fragments having at least 70 per cent homology to this region and to the corresponding region from other species (e.g. M.microti, see AAQ57762) are claimed. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mycobacterium DNA fragments - corresp. to 65-kD antigen sequences, and primers and probes for detecting Mycobacterium spp.
                                 Mycobacterium DNA fragments - corresp. to 65-kD antigen sequences, and primers and probes for detecting Mycobacterium spp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bovis, species specific detection, probe, primer, ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 268;
                                                                                                                                                                                                                                                                                          Score 31.8; DB 2; Length 268;
Pred. No. 0.078;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mycobacterium bovis 65kD antigen coding sequence (461-728)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 268 BP; 57 A; 84 C; 94 G; 33 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                     Sequence 268 BP; 57 A; 84 C; 94 G; 33 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               58.9%; Score 31.8; DB 2; 94.3%; Pred. No. 0.078; 1ive 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                           1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                               63
                                                                                                                                                                                                                                                                                                                                                                                                  29 ACCGATGACGTCGCCGGTGACGCCACCACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 2; Page 14; 40pp; French.
                                                                                             Claim 2; Page 15; 40pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93EP-00420339
                                                                                                                                                                                                                                                                                          Query Match 58.9%;
Best Local Similarity 94.3%;
Matches 33; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92FR-00010094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ57761 standard; DNA; 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 94.3 tes 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pechere J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1994-058892/08.
WPI; 1994-058892/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mycobacterium bovis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (INMR ) BIO MERIEUX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65kD antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-AUG-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-AUG-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-FEB-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EP584023-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mabilat C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAQ57761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAQ57761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
ò
                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes an improvement to a method requiring the administration of interferon alpha (IFN-alpha), involving administering an immunostimulatory nucleic acid (ISNA). The sequences of a number of such nucleic acids are also provided. These may comprise oligonucleotides with phosphorothicate backbones, palindromes, or G-rich sequences. The sequences of the invention are useful in the treatment of proliferative diseases, such as cancers, and viral infections. The present sequence is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                           Improving the efficacy of treatments involving the administration of interferon-alpha by co-administering an isolated immunostimulatory nucleic acid.
  viral infection; phosphorothioate backbone; palindrome; cancer; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               microti; species specific detection; probe; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mycobacterium microti 65kD antigen coding sequence (461-728).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      / Match 58.9%; Score 31.8; DB 4; Length 45; Local Similarity 94.3%; Pred. No. 0.061; les 33; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 45 BP; 8 A; 17 C; 15 G; 5 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               an example of an immunostímulatory oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Accearcacercecegrandescenceaceacece 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 167; 168pp; English
                                                                                                                                                                                                                                                                                                   Bratzler RL, Krieg A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP
                                                                                                                                                                                                                                      (COLE-) COLEY PHARM GROUP INC. (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92FR-00010094
                                                                                                                                                           2000WO-US026527
                                                                                                                                                                                                   99US-0156147P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93EP-00420339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAQ57762 standard; DNA; 268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pechere J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mycobacterium microti
                                                                                                                                                                                                                                                                                                                                        WPI; 2001-290487/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (INMR ) BIO MERIEUX
                                                                               WO200122990-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65kD antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-2003
15-AUG-1994
                                                                                                                                                           27-SEP-2000;
                                                                                                                                                                                                   27-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12-AUG-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-AUG-1992;
                                                                                                                                                                                                                                                                                                   Hartmann G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EP584023-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mabilat C,
                                                                                                                    05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-PEB-1994
```

Query Match

Best Loc Matches

8 음 AAQ57762;

AAQ57762 RESULT

ö

Gaps

g

```
The present invention provides a pair of primers for specifically amplifying a heat shock protein 65 (hsp 65) gene fragment of mycobacterial species comprising those sequences shown in ACF04316-ACF04317. Also provided are a number of hsp65 gene fragments, mainly from mycobacterial species. The methods and compositions of the present invention are useful for amplifying hsp 65 gene of mycobacterial species, and identifying and diagnosing mycobacterial species in tuberculosis infection. The present sequence is a gene fragment of the invention
                                                                                                                                                                                                                                                                                              Primers for amplifying a heat shock protein 65-gene fragment mycobacterial species, useful for identifying and diagnosing mycobacterial species in tuberculosis infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mycobacterium; hsp65; heat shock protein 65; identification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 604 BP; 121 A; 182 C; 210 G; 91 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3;
0.088;
2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58.9%; Score 31.8; DB 9;
94.3%; Pred. No. 0.088;
iive 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56 ACCGATGACGTCGCCGGTGACGCCACCACGGC 90
                                                                                                                                                                                                                                                                                                                                                                        Claim 3; Page 65; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACF04273 standard; DNA; 604 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        microti hsp65 gene fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-JAN-2003; 2003WO-KR000131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-JAN-2002; 2002KR-00004297.
05-MAR-2002; 2002KR-00011648.
                                                                                                          24-JAN-2002; 2002KR-00004297.
05-MAR-2002; 2002KR-00011648.
                                                                       21-JAN-2003; 2003WO-KR000131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-NOV-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kim J;
                                                                                                                                                                                                                        Kim J;
                                                                                                                                                                (BIOM-) BIOMEDLAB CORP. (KIMB/) KIM B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tuberculosis; gene; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (BIOM-) BIOMEDLAB CORP (KIMB/) KIM B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mycobacterium microti.
                                                                                                                                                                                                                                                           WPI; 2003-598757/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-598757/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2003062470-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kook Y,
WO2003062470-A1.
                                                                                                                                                                                                                        Kook Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-JUL-2003.
                                    31-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACF04273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kim B,
                                                                                                                                                                                                                        Kim B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACF0427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This sequence corresponds to the mycobacterial gene which encodes a 65KD antigen of the group of tuberculosis bacteria. Regions within this sequence can be used as primers to amplify mycobacterial genes and detect mycobacteria. Antibodies can be induced by immunisation with the DNA sequence or its fragments. These can also be used to detect mycobacteria in assays such as ELISA or RIA procedures. See also AAQ6505-Q06506, AAQ66508-Q06513 and AAR09336. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleotide sequences of actinomycetales - used as primers for synthesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
58.9%; Score 31.8; DB 2; Length 342;
Best Local Similarity 94.3%; Pred. No. 0.081;
Matches 33; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mycobacterium; hap65; heat shock protein 65; identification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 342 BP; 75 A; 103 C; 122 G; 42 T; 0 U; 0 Other;
                                                                                                                                                                                                                        Encodes protein IV homologous to mycobacterial antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46 Accentacetrecceeraaceecaceaceec 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gicouel
29 ACCGATGACGTCGCCGGTGACGCCACCACGACGGC 63
                                                                                                                                                                                                                                                             mycobacterial antigen; actinomycetales; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (INRM ) INSERM INST NAT SANTE & RECH MED (INSP ) INST PASTEUR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Levyfrebau V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 9; Page 34; 61pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP.
                                                                                            ם
                                                                                                                                                                                                                                                                                                                                                                                                              89FR-00005057
                                                                                                                                                                                                                                                                                                                                                                                                                                                   89FR-00005057
                                                                                           AAQ06507 standard; DNA; 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACF04267 standard; DNA; 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M bovis hsp65 gene fragment
                                                                                                                                                                                                                                                                                                  Mycobacterium tuberculosis
                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of DNA of actinomycetales.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-NOV-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Grandchamp B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tuberculosis, gene, ds.
                                                                                                                                                                  (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mycobacterium bovis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1990-348478/46.
                                                                                                                                                                                                                                                                                                                                                                                                              17-APR-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-APR-1989;
                                                                                                                                                                25-MAR-2003
22-FEB-1991
                                                                                                                                                                                                                                                                                                                                     WO9012875-A
                                                                                                                                                                                                                                                                                                                                                                          01-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACF04267;
                                                                                                                               AAQ06507;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hance A,
```

RESULT 8

셤 ઠે

ö

Gaps

ö

Indels

Length 604;

ğ

ò 요

```
58.9%; Scor.
94.3%; Pred
0; N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 3; Page 62; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                M africanum hsp65 gene fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-JAN-2002; 2002KR-00004297.
05-MAR-2002; 2002KR-00011648.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-JAN-2003; 2003WO-KR000131
                 ch
1 Similarity 94.3%;
33; Conservative
                                                                                                                                                                                                                                 ACF04263 standard; DNA; 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACF04306 standard; DNA; 604
                                                                                                                                                                                                                                                                                                          06-NOV-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                              Mycobacterium africanum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kim J;
                                                                                                                                                                                                                                                                                                                                                                                                        tuberculosis; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BIOM-) BIOMEDLAB CORP. (KIMB/) KIM B.
                                                                                                                                                                                                                                                                                                                                                                                      Mycobacterium; hsp65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-598757/56.
                   Query Match
Best Local Similarity
Matches 33; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2003062470-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kook Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-JUL-2003
                                                                                                                                                                                                                                                                      ACF04263;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACF04306;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kim B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACF04306
ID ACF0
XX
AC ACF0
XX
                                                                                                                                                                                                               ACF04263
ID ACF
                                                                                                                                                                                                                                                    ઠ
                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amplifying a heat shock protein 65 (hsp 65) gene fragment of mycobacterial species comprising those sequences shown in ACF04316-ACF04317. Also provided are a number of hsp65 gene fragments, mainly from mycobacterial species. The methods and compositions of the present invention are useful for amplifying hsp 65 gene of mycobacterial species, and identifying and diagnosing mycobacterial species in tuberculosis infection. The present sequence is a gene fragment of the invention
                                                                                                             The present invention provides a pair of primers for specifically amplifying a heat shock protein 65 (hsp 65) gene fragment of mycobacterial species comprising those sequences shown in ACF04316-ACF04317. Also provided are a number of hsp65 gene fragments, mainly from mycobacterial species. The methods and compositions of the present and identifying and diagnosing mycobacterial species, and identifying and diagnosing mycobacterial species in tuberculosis infection. The present sequence is a gene fragment of the invention
                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present invention provides a pair of primers for specifically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
     ö
                                                                                                                                                                                                                                                                                                                                                                    ö
Primers for amplifying a heat shock protein 65-gene fragment mycobacterial species, useful for identifying and diagnosing mycobacterial species in tuberculosis infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Primers for amplifying a heat shock protein 65-gene fragment mycobacterial species, useful for identifying and diagnosing mycobacterial species in tuberculosis infection.
                                                                                                                                                                                                                                                                                                                          Match 58.9%; Score 31.8; DB 9; Length 604; Local Similarity 94.3%; Pred. No. 0.088; les 33; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mycobacterium; hsp65; heat shock protein 65; identification;
                                                                                                                                                                                                                                                                                          Sequence 604 BP; 121 A; 182 C; 210 G; 91 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 604 BP; 121 A; 182 C; 210 G; 91 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                          1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                  56 ACCGATGACGTCGCCGGTGACGCCACGACGGC 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 3; Page 65-66; 102pp; English.
                                                                             Claim 3; Page 69-70; 102pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bovis BCG hsp65 gene fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACF04268 standard; DNA; 604 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-JAN-2002; 2002KR-00004297.
05-MAR-2002; 2002KR-00011648.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-JAN-2003; 2003WO-KR000131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mycobacterium bovis BCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kim J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tuberculosis; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (BIOM-) BIOMEDLAB CORP (KIMB/) KIM B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2003-598757/56.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kook Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2003062470-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACF04268;
                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kim B,
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention provides a pair of primers for specifically amplifying a heat shock protein 65 (hsp 65) gene fragment of mycobacterial species comprising those sequences shown in ACF04316-ACF04317. Also provided are a number of hsp65 gene fragments, mainly from mycobacterial species. The methods and compositions of the present invention are useful for amplifying hsp 65 gene of mycobacterial species, and identifying and diagnosing mycobacterial species in tuberculosis
                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    infection. The present sequence is a gene fragment of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Primers for amplifying a heat shock protein 65-gene fragment of mycobacterial species, useful for identifying and diagnosing mycobacterial species in tuberculosis infection.
                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 604;
Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 heat shock protein 65; identification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 604 BP; 121 A; 182 C; 210 G; 91 T; 0 U; 0 Other;
                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6
  6
                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       accearcacecceercaceccaccaceaceec 90
                                                                                                   35
                                                                                                                                                  90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 31.8; DB 9
Pred. No. 0.088;
0; Mismatches
Score 31.8; DB 9
Pred. No. 0.088;
0; Mismatches
                                                                                                1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC
```

H

```
The present sequence encodes a fusion protein comprising a Mycobacterium bovis heat shock protein (Hsp) 65 fused at its C terminal to a HBV16 E7 protein. The fusion protein is used in the method of the invention. The specification describes a method of determining whether a compound stimulates a Th1-like response. Th1 cells are a subset of CD4+ T lymphocyte cells. The method comprises contacting naive lymphocytes in vitro with a fusion protein comprising at least a fragment of Hsp, and then detecting the TH1-like response exhibited by the cell sample. The proteins which may be used in the method of the invention are Hsp55, Hsp40, Hsp10, Hsp50, and Hsp71. The method may be used to identify compounds that stimulate Th1-like responses in response to microbial
                                                                                                                                                                                                                                                                                                     Screening for compounds that stimulate Thl-like responses in CD4+lymphocyte cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 888 BP; 224 A; 235 C; 272 G; 157 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            recombinant protein; vaccine; fusion protein; HSP65; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8; DB 5; I
0.093;
ches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (DIWE-) DIWEI HUAYU BIOTECHNOLOGY CO LTD BEIJING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238 Accdardacerceccegraaceccaccaceacec 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 31.8;
Pred. No. 0.
                                                                                                                                                                           (STRE-) STRESSGEN BIOTECHNOLOGIES CORP.
                                                                                                                                                                                                                                                                                                                                                                      Example 12; Fig 11; 88pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP.
                                                                                                                                                                                                                 Mizzen LA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADW23618 standard; DNA; 1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-2002; 2002CN-00122116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-MAY-2002; 2002CN-00122116.
                                                                                              10-JUL-2000; 2000WO-US018828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 58.9%;
Best Local Similarity 94.3%;
Matches 33; Conservative (
                                                                                                                                    99US-0143757P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sun M, Yu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-239553/23
                                                                                                                                                                                                                                                     WPI; 2001-138361/14
                                                                                                                                                                                                               Chu NR,
                                                                                                                                                                                                                                                                       P-PSDB; AAB31615.
                    WO200104344-A2
                                                                                                                                  08-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CN1462636-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-DEC-2003.
                                                          18-JAN-2001
                                                                                                                                                                                                                 Siegel M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pathogens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADW23618;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSP65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
ADW23618
  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention provides a pair of primers for specifically ampair shock protein 65 (hap 65) gane fragment of mycobacterial species comprising those sequences shown in ACF04316-ACF04317. Also provided are a number of hap65 gene fragments, mainly from mycobacterial species. The methods and compositions of the present amoventon are useful for amplifying hap 65 gene of mycobacterial species, and identifying and diagnosing mycobacterial species in tuberculosis infection. The present sequence is a gene fragment of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vrotein; Hsp; Th1 response; Th1 cell; CD4+ T lymphocyte cell;
Hsp65; Hsp40; Hsp10; Hsp60; Hsp71; microbial pathogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          늉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             o;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Primers for amplifying a heat shock protein 65-gene fragment mycobacterial species, useful for identifying and diagnosing mycobacterial species in tuberculosis infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 58.9%; Score 31.8; DB 9; Length 604; Best Local Similarity 94.3%; Pred. No. 0.088; Matches 33; Conservative 0; Mismatches 2; Indels
                                                                        Mycobacterium; hsp65; heat shock protein 65; identification; tuberculosis; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seguence 604 BP; 121 A; 182 C; 210 G; 91 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .888
/*tag= a
/product= "Hsp65-E7 fusion protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accdardacorcoccogrados de Accdardacocci 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleotide sequence of Hap65-E7 fusion protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. .888
                                  M tuberculosis hsp65 gene fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 3; Page 93; 102pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멾
                                                                                                                                                                                                                                                     21-JAN-2003; 2003WO-KR000131
                                                                                                                                                                                                                                                                                           24-JAN-2002; 2002KR-00004297
                                                                                                                                                                                                                                                                                                             05-MAR-2002; 2002KR-00011648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF25022 standard; DNA; 888
                                                                                                                                    Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein; Hsp;
                                                                                                                                                                                                                                                                                                                                                                                                            Kook Y, Kim J;
                                                                                                                                                                                                                                                                                                                                                  BIOM-) BIOMEDLAB CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mycobacterium bovis.
Human papillomavirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-598757/56.
                                                                                                                                                                         WO2003062470-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein; 88
                                                                                                                                                                                                                                                                                                                                                                      KIM B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lymphocyte,
E7 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-APR-2001
06-NOV-2003
                                                                                                                                                                                                               31-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Heat shock
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAF25022;
                                                                                                                                                                                                                                                                                                                                                                      KIMB/)
                                                                                                                                                                                                                                                                                                                                                                                                            Kim B,
```

RESULT 13

g

ò

AAF25022

Key

ô

Gaps

Vaccine of recombined albumen for preventing and treating infection of human hepatitis C virus. ##X8X0000000000X8

Example 1; Page 14; 54pp; Chinese.

The invention relates to a recombinant protein vaccine which is a fusion protein of BCG vaccine's heat shock protein 65 and the core antigen of multi-epitope hepatitis C virus. Also claimed is the amino acid sequence and nucleotide sequence for coding it, the expression carrier containing nucleotide sequence, the host cell containing expression carrier, the preparing process of recombinant protein vaccine, the vaccine containing recombinant protein for preventing and treating hepatitis C and a method for detecting the activity of specifically killing T-lymphocytes by the hepatitis C induced by vaccine and its cell model are disclosed. The present sequence represents a HSP65 DNA.

Seguence 1496 BP; 300 A; 456 C; 523 G; 217 T; 0 U; 0 Other;

Gaps ö Score 31.8; DB 13; Length 1496; Pred. No. 0.1; 0; Mismatches 2; Indels 0; 58.9%; Query Match
Query Match
Best Local Similarity 94.3.,
Best Local 33; Conservative

ö

240 Acceateacerceceereaceceaceacece 274 1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35 ò g

ACA38272 standard; DNA; 1620 BP RESULT 15 ACA38272

(first entry) 19-JUN-2003 ACA38272;

Prokaryotic essential gene #19929.

Antisense; ds; prokaryotic essential gene; cell proliferation; design; gene drug

Mycobacterium bovis

WO200277183-A2

03-OCT-2002

21-MAR-2002; 2002WO-US009107

2001US-00948993. 2001US-0342923P. 2002US-00072851. 2001US-00815242 25-OCT-2001; 08-FEB-2002; 21-MAR-2001; 06-SEP-2001;

(ELIT-) ELITRA PHARM INC.

06-MAR-2002; 2002US-0362699P

Zyskind JW; Xu HH; Ohlsen KL, Forsyth RA, Haselbeck R, Yamamoto R, Malone C, Carr GJ, Zamudio C, Trawick JD, Wang L, Wall D,

WPI; 2003-029926/02 P-PSDB; ABU34402.

screening New antisense nucleic acids, useful for identifying proteins or s for homologous nucleic acids required for cellular proliferation isolate candidate molecules for rational drug discovery programs.

Claim 14; SEQ ID NO 26142; 1766pp; English.

The invention relates to an isolated nucleic acid comprising any one of the 6213 antisense sequences given in the specification where expression of the nucleic acid inhibits proliferation of a cell. Also included are:
(1) a vector comprising a promoter operably linked to the nucleic acid encoding a polypeptide whose expression is inhibited by the antisense

ö K. pneumoniae or P. aeruginosa. The present sequence is one of the target prokaryotic essential genes. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at Gaps .; 0 8; Length 1620; Sequence 1620 BP; 321 A; 489 C; 571 G; 239 T; 0 U; 0 Other; Indels nucleic acid; (2) a host cell containing the vector; 7 DB Score 31.8; DE Pred. No. 0.1; 0; Mismatches ftp.wipo.int/pub/published_pct_sequences 58.9%; Conservative Local Similarity nes 33; Conserv Query Match Matches

Search completed: May 4, 2006, 02:44:13 Job time : 409.241 secs

238 Accelarcacerceceeraacececaceacec 272

1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC

ઠે 셤

35

This Page Blank (uspto)

	Ġ.
	ation Ltd
n 5.1.7	Biocceleration
version	- 2006
enCore) 1993
ဗ္ဗ	9
	Copyright

model
3
using
search,
nucleic
1
nucleic
ŏ

May 4, 2006, 02:45:02 ; Search time 3827.48 Seconds (without alignments) 660.095 Million cell updates/sec Run on:

US-10-789-758A-7 54 1 accgatgacgtcgccggtga......cgttttgtcgttttgtcgtt 54 Title: Perfect score: Sequence:

IDENTITY NUC Gapop 10.0 , Gapext 1.0 Scoring table:

41078325 segs, 23393541228 residues Searched:

82156650 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

9b_est1:: 9b_est2::* 9b_htc::* 9b_est4::* 9b_est5::* 9b_est7::* 9b_gss1::* 9b_gss1::* EST:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	DN606418 EST01629	DN606663 EST01874	BG859843 1024065H0	CV956322 PXrpxc 34	CV936508 PMrpcm_60	CV931678 PM057F4 m	CV943010 PMrpct_69	_		CV931418 PM054D9 m			_	BE776273 MY-13-B-0	BE777047 MY-23-H-0	CF843128 psHB023xN	CV956806 PXrpxc 41	CV960823 PYrpcy_24	CV958412 PXrpxc 60	BE775585 MY-04-C-0	CV893305 PA003F9 m	CV940688 PMrpct_28
	JB ID	8 DN606418	8 DN606663	2 BG859843	8 CV956322	8 CV936508	8 CV931678	8 CV943010	8 CV939489	8 CV913612	8 CV931418	8 CV901361	8 CV941703	8 CV937223	2 BE776273	2 BE777047	7 CF843128	8 CV956806	8 CV960823	8 CV958412	2 BE775585	8 CV893305	8 CV940688
	Match Length UB	1 509	1 584	4 1911			0 543	0 553	195 0	0 562	0 576											929 0	C 677
	- ;	51.	51.1		50.0	20.	20.	50.0	50.	50.0	50.	50.0	50.	50.0	20.	50.0	50.	50.0	50.0	50.0	50.0	50.0	50.
	Score	27.6	27.6	27.2	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Result	. No	1	8	3	4	S	9	7	80	0	10	11	12	13	14	15	16	17	18	19	20	21	22

9 CGTCGCCGGTGACGGCACCACCGTCGTTTTGTCGTTTTGT 50

ઠે

	CV934337 PMrpcm 10 AL939932 Arabidops	BG787025 SEAUMC006	BG511093 sac65f11.		CD795238 BST665599		CB279923 ru89c03.y	CO967037 BeE90N03H	CB375723 rw14f08.y	CB379689 rq79b08.y		CO975434 BeG90N16D	CO974121 BeG90N02A	CB375845 rw16b08.y	CO970916 BeG120N26	CO970566 BeG120N22	CO977844 BeZSPN11F	CO962935 BeE120N36	CO970647 BeG120N23	BP010824 BP010824
CV899250 CV959707	CV934337 AL939932	BG787025	BG511093	CC793291	CD795238	CB375787	CB279923	C0967037	CB375723	CB379689	CB376348	C0975434	C0974121	CB375845	C0970916	C0970566	C0977844	CO962935	CO970647	BP010824
ω ω	8	2	~	6	9	ø	9	7	9	9	9	7	7	ø	7		^	7	7	٣
698 718	724	873	377	372	814	476	521	535	280	296	601	608	611	620	626	637	639	645	648	999
50.0	50.0	49.3	48.1	47.8	47.8	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4
27	26.8	26.6	56	25.8	25.8	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
23	25	c 23	28	29	30	31	32	33	34	35	36	37	38	39	40	41	c 42	43	44	45

ALIGNMENTS

RESULT 2 DN606663 LOCUS DEFINITION

용

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

AUTHORS TITLE

JOURNAL

COMMENT

FEATURES

ORIGIN

REFERENCE

```
/note="Vector: pBluescript II SK-; Site_I: EcoRI; Site_2:
Xho1; This library, constructed by John Davies and Jeffrey
McDermott, combines constructed by John Davies and Jeffrey
McDermott, combines constructed by John Davies and Jeffrey
mid-log phase in TAP (acetae-containing) medium in the
light, TAP medium in the dark, HS (minimal) medium in the
light, TAP medium in the dark, HS (minimal) medium in
ambient levels of CO2 and HS medium bubbled with 5% CO2.
PolyA mRNA was purified from each sample, pooled and CDNA
synthesized. The cDNA was directionally cloned into lambda
ZAP II (Stratagene) in the EcoRI (5') and XhoI (3') sites.
pBluescript II SK- plasmids were excised from the lambda
ZAP clones by superinfection with ExAssist (Stratagene)
phage. The library was normalized using method 4 described
in Bonaldo et al (1996) Genome Research 6: 791-806."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CVYDD522
PXTDXC 3414 mycelium, starved in water Phytophthora infestans CDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Randall,T., Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C., Randall,T., Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C., Gaffney,T., Kelkar,H., Fong,A.M., Gates,K., Roberts,S., Yatzkan,E., Gaffney,T., Law,M., Testa,A., Torto-Alalibo,A., Zhang,M., Zheng,L., Mueller,E., Windass,J., Binder,A., Birch,P.R.J., Gisi,U., Govers,F., Gow,N.A., Mauch,F., van West,P., Waugh,M.E., Yu,J., Boller,T., Kamoun,S., Lam,S.T. and Judelson, H.S.
                                                                                                                                                                                                                                                                      Large-scale gene discovery in the comycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota, stramenopiles, Oomycetes, Pythiales, Pythiaceae,
Phytophthora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1766 TGACGTATTAGGTCACGTCACNTCGTCGTCGTCTTGTCGTCTTT 1718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 27.2; DB 2; Length 1911;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 TGACGTCGCCGGTGACGGCACCACGTCGTTTTTGTCGTTTTTGTCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plant-Microbe Interact. 18 (3), 229-243 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 50.4%; Score 27.2; DB 2; Length 19
Best Local Similarity 71.4%; Pred. No. 18;
Matches 35; Conservative 0; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Phytophthora infestans (potato late blight agent)
Phytophthora infestans
                                                                                                                                                                        organism="Chlamydomonas reinhardtii"
                                                                                                                                                                                                           /mol_type="mRNA"
/strain="CC-1690 wild type mt+ 21gr"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Phytophthora infestans"
/mol_type="mRNA"
/strain="88069"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Department of Plant Pathology
University of California
Webber Hall, Riverside, CA 92521,
TEL: 909 787 4199
Fax: 909 787 4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: howard.judelson@ucr.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db xref="taxon:4787"
                                                                                                                      Location/Qualifiers
Durham, NC 27708-1000
Tel: 919 613 8159
Fax: 919 613 8177
Email: chauser@duke.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CV956322.1 GI:58146113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Judelson HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15782637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CV956322
                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CV956322
                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chlamydomonas reinhardtii
Chlamydomonas reinhardtii
Chlamydomonas reinhardtii
Chlamydomonadales; Chlorophyta; Chlorophyceae;
Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae;
Chlamydomonadales; Chlamydomonadales;
I (bases 1 to 1911)
S Grossman, A., Davies, J., Federspiel, N., Harris, E., Lefebvre, P.,
Analyses of the Chlamydomonas reinhardtii Genome: A Model,
Unicellular System for Analyzing Gene Function and Regulation in
Vascular Plants; project phase 2
Contact: Charles Hauser
DCMB Box 91000
Duke University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fang, Y., Fan, X., Pang, G., Chen, B., Wang, G. and Hu, S.
Sequencing and analysis of expressed sequence tags from a Porphyra
Haitanensis Sporophyte cDNA Library
Unpublished (2005)
Contact: Hu Songnian, Wang Guangce, Fang Yongjun, Fan Xiaolei, Pang
Guoxing, Chen Baoxian
Core Facilities (Hu); Key laboratory of experimental marine biology
                                                                                                                                            DN606663 Sporophyte cDNA Library Porphyra haitanensis cDNA 5', mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 29-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Beijing Genomics Institute, CAS (Hu); Institute of oceanology, CAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beijing Airport Industrial Zone B-6, Beijing 101300, China (Hu); Nanhai Road 7#, Qingdao 266071, Ghina (Wang)
Tel: 86-10-80488851 (Hu); 86-532-2898574 (Wang)
Fax: 86-10-80498876 (Hu); 86-532-2898675 (Wang)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BG859843 11024065H03.x1 C. reinhardtii CC-1690, normalized, Lambda Zap II Chlemydomonas reinhardtii cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: husn@genomics.org.cn (Hu); gcwang@ms.qdio.ac.cn (Wang)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Rhodophyta; Banglophyceae; Banglales; Banglaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 51.1%; Score 27.6; DB 8; Length 584; Best Local Similarity 78.6%; Pred. No. 12; Matches 33; Conservative 0; Mismatches 9; Indels (
74 CGGCGCCGTTGACGCCGCCGCGTCGACCTTTTCCCGCTTTGT 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cedcecerreacecececercacerrine 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1...584
/organism="Porphyra haitanensis"
/organism="Porphyra haitanensis"
/mol_type="mRNA"
/db_xref="taxon:76159"
/dev_stage="Sporophyte"
/lab_host="Mycorphyte cDNA Library"
/note="Vector: pBluescript!!"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9 CGTCGCCGGTGACGGCACCACGTCGTCGTTTTGT
                                                                                                                                                                                                                                          DN606663.1 GI:61664163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BG859843.1 GI:14241027
                                                                                                                                                                                                                                                                                                                              Porphyra haitanensis
Porphyra haitanensis
                                                                                                                                                                                                                                                                                                                                                                                                                            Porphyra.
1 (bases 1 to 584)
                                                                                                                                                                                                                 sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Wang)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Wang)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     75
```

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS

TITLE

JOURNAL

COMMENT

BG859843/c DEFINITION

RESULT 3

δ g

ORIGIN

DEFINITION

RESULT 5 CV936508

ઠે 셤 ACCESSION VERSION KEYWORDS SOURCE

ORGANISM

REFERENCE AUTHORS

```
CV943010 553 bp mRNA linear EST 25-JAN-2005 PMrpct_6963 mating of 88069 (A1) and 618 (A2) Phytophthora infestans cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Randall,T., Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C.,
Randall,T., Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C.,
Kelkar,H., Fong,A.M., Gates,K., Roberte,S., Yatzkan,E., Gaffney,T.,
Law,M., Testa,A., Torto-Alalibo,A., Zhang,M., Zheng,L., Mueller,E.,
Muindass,J., Binder,A., Birch,P.R.J., Glsi,U., Govers,F., Gow,N.A.,
Mauch,F., van West,P., Waugh,M.E., Yu,J., Boller,T., Kamoun,S.,
Lam,S.T. and Judelson, H.S.
                                                                  Phytophthora.

1 (bases I to 543)

Randall,T., Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C., Relkar,H., Fong,A.M., Gates,K., Roberts,S., Yatzkan,E., Gaffney,T., Law,M., Testa,A., Torto-Alalibo,A., Zhang,M., Zheng,L., Mueller,E., Windass,J., Binder,A., Birch,P.R.J., Gisi,U., Govers,F., Gow,N.A., Mauch,F., van West,P., Waugh,M.E., Yu,J., Boller,T., Kamoun,S., Lam,S.T. and Judelson, H.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Large-scale gene discovery in the comycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                        Large-scale gene discovery in the oomycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
                                              Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /eex="Al and A2"
/clone_lib="mating of 88069 (A1) and 618 (A2)"
/note="Vector: pSPORT1"
                                                                                                                                                                                                                                                                                                                     Mol. Plant-Microbe Interact. 18 (3), 229-243 (2005) 15782637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mol. Plant-Microbe Interact. 18 (3), 229-243 (2005)
15782637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 543;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Phytophthora infestans (potato late blight agent)
Phytophthora infestans
Phytophthora infestans (potato late blight agent)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Phytophthora infestans"
/mol_type="mRNA"
/strain="88069 and 618"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68 ACCAACGACGGGCGGTGACGGCACCACGTCGGC 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                             Webber Hall, Riverside, CA 92521, USA
Tel: 909 787 4199
Fax: 909 787 4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Webber Hall, Riverside, CA 92521, USA
Tel: 909 787 4199
Fax: 909 787 4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 27;
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: howard.judelson@ucr.edu
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      db xref="taxon:4787"
                                                                                                                                                                                                                                                                                                                                                                                                 Department of Plant Pathology
University of California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Department of Plant Pathology
University of California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CV943010.1 GI:58132766
                      Phytophthora infestans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch 50.0%;
1 Similarity 85.7%;
30; Conservative (
                                                                                                                                                                                                                                                                                                                                                                           Contact: Judelson HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Judelson HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hytophthora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 30; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                            JOURNAL
PUBMED
COMMENT
                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
CV943010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cv936508 537 bp mRNA linear EST 25-JAN-2005 PMrpcm_6045 mating of 88069 (A1) and 618 (A2) Phytophthora infeatans CDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Randall, T., Dwyer, R.A., Huttema, E., Beyer, K., Cvitanich, C., Randall, T., Dwyer, R.A., Gates, K., Roberts, S., Yatzkan, E., Gaffney, T., Relkar, H., Fong, A.M., Gates, K., Roberts, S., Yatzkan, E., Mueller, E., Windass, J., Binder, A., Birch, P.R.J., Gisi, U., Govers, F., Gow, N.A., Mauch, F., van Weet, P., Waugh, M.E., Yu, J., Boller, T., Kamoun, S., Lam, S. T. and Judelson, H.B., Yu, J., Boller, T., Kamoun, S., Large-scale gene discovery in the comycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                  ö
                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sukaryota, stramenopiles, Oomycetes, Pythiales, Pythiaceae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone lib="mating of 88069 (A1) and 618 (A2)"
/note="Vector: pSPORT1"
                                                                                                                 Score 27; DB 8; Length 410;
Pred. No. 20;
0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mol. Plant-Microbe Interact. 18 (3), 229-243 (2005)
15782637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.0%; Score 27; DB 8; Length 537; 85.7%; Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Phytophthora infestans (potato late blight agent)
Phytophthora infestans
                        /clone_lib="mycelium, starved in water"
/note="Vector: pSPORT1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Phytophthora infestans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  319 ACCAACGACGCGGCCGGTGACGGCACCACGTCGGC 353
                                                                                                                                                                                                                                      352 ACCAACGACGCGGCCGGTGACGCCACCACGTCGGC 386
                                                                                                                                                                                                              1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Department of Plant Pathology
University of California
Webber Hall, Riverside, CA 92521, US
Fax: 909 787 4294
Email: howard.judelson@ucr.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/strain="88069 and 618"
/db_xref="taxon:4787"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sex="Al and A2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CV936508.1 GI:58126123
                                                                                                                 ch 50.0%;
1 Similarity 85.7%;
30; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Judelson HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 85.79
***rhes 30; Conservative
    /sex="A1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1, .537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hytophthora.
                                                                                                                   Query Match
Best Local Similarity
Matches 30; Conserv
```

JOURNAL PUBMED COMMENT

TITLE

FEATURES

ORIGIN

DEFINITION

RESULT 6 CV931678

ઠે 셤 ACCESSION VERSION KEYWORDS

ö

Gaps

FEATURES

ORIGIN

```
Randall, T., Dwyer, R.A., Huitema, E., Beyer, K., Cvitanich, C., Randall, T., Dwyer, R.A., Huitema, E., Beyer, K., Cvitanich, C., Kelkar, H., Pong, A.M., Gates, K., Roberts, S., Yatzkan, E., Gaffney, T., Law, M., Testa, A., Tortco-Alalibo, A., Zhang, M., Zhang, M., Zheng, L., Mueller, E., Windass, J., Binder, A., Birch, P.R.J., Gisi, U., Govers, F., Gow, N.A., Mauch, F., van West, P., Waugh, M.E., Yu, J., Boller, T., Kamoun, S., Lam, S.T. and Judelson, H.S., Yu, J., Boller, T., Kamoun, S., Large-scale gene discovery in the comycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    576 bp mRNA linear EST 25-JAN-2005 CDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Randall, T., Dwyer, R.A., Huitema, E., Beyer, K., Cvitanich, C., Randall, T., Dwyer, R.A., Huitema, E., Beyer, K., Cvitanich, C., Kelkar, H., Fong, A.M., Gates, K., Roberts, S., Yatzkan, B., Gaffney, T., Law, M., Testa, A., Tortco-Alalibo, A., Zhang, M., Zheng, L., Mueller, E., Windass, J., Binder, A., Birch, P.R.J., Gisi, U., Govers, F., Gow, N.A., Mauch, F., van West, P., Waugh, M.B., Yu, J., Boller, T., Kamoun, S., Lan, S.T. and Judelban, H.S.
Lange-scale gene discovery in the oomycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                               CV913612 55-JAN-2005
PF019D6 sporangia, cleaving Phytophthora infestans cDNA, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
Phytophthora
                                                                                                                                                                                                                           Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
Phytophthora:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mol. Plant-Microbe Interact. 18 (3), 229-243 (2005)
15782637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.0%; Score 27; DB 8; Length 562;
85.7%; Pred. No. 21;
tive 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fungi
Mol. Plant-Microbe Interact. 18 (3), 229-243 (2005)
                                                                                                                                                                              Phytophthora infestans (potato late blight agent)
Phytophthora infestans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Phytophthora infestans (potato late blight agent)
Phytophthora infestans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Phytophthora infestans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359 ACCAACGACGCGGCGGTGACGCCACGTCGGC 393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="sporangia, cleaving"
/note="Vector: pSPORT1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Department of Plant Pathology
University of California
Webber Hall, Riverside, CA 92521,
Tel: 909 787 4199
Fax: 909 787 4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: howard.judelson@ucr.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:4787"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="mRNA"
/strain="88069"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CV931418.1 GI:58121038
                                                                                                                                  GI:58103161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Judelson HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sex="A1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 85.7
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .562
                                                                                                                                  CV913612.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                               LOCUS
DEFINITION
                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
CV931418
                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                               VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
       CV913612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
Phytophthora.

1 (bases I to 561)

1 (bases I to 561)

Kelkar, H., Fong, A.M., Gates, K., Roberts, S., Yatzkan, E., Gaffney, T., Law, M., Testa, A., Torto-Alailbo, A., Zhang, M., Zheng, L., Mueller, E., Muindass, J., Bindar, A., Birch, P.R.J., Gist, U., Govers, F., Gow, N.A., Mauch, P., van West, P., Waugh, M.E., Yu, J., Boller, T., Kamoun, S., Lem, S.T. and Judelson, H.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 25-JAN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Large-scale gene discovery in the comycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 561 bp mRNA linear EST 25 PMrpct_1071 mating of 88069 (Al) and 618 (A2) Phytophthora infestans cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                         /organism="Phytophthora infestans"
/mol_type="mRNA"
/strain="88069 and 618"
/db.xref="taxon:4787"
/ssx="A1 and A2"
/clone_lib="mating of 88069 (A1) and 618 (A2)"
/note="Vector: pSPORTI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/strain="88069 and 618"
/db_xref="texon:4787"
/sex="Al and A2"
/clone lib="meting of 88069 (Al) and 618 (A2)"
/note="Vector: pSPORT1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 50.0%; Score 27; DB 8; Length 561; Best Local Similarity 85.7%; Pred. No. 21; Matches 30; Conservative 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mol_ Plant-Microbe Interact. 18 (3), 229-243 (2005)
15702637
                                                                                                                                                                                                                                                                                                      Query Match 50.0%; Score 27; DB 8; Length 553; Best Local Similarity 85.7%; Pred. No. 21; Matches 30; Conservative 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Phytophthora infestans (potato late blight agent)
Phytophthora infestans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Phytophthora infestans"
                                                                                                                                                                                                                                                                                                                                                                                                                                         221 ACCAACGACGGCCGGTGACGGCACCACGTCGGC 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  384 Accaacdacccccccccccccccccccccccccccccc
                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Judelson HS
Department of Plant Pathology
University of California
Webber Hall, Riverside, CA 92521, USA
Tel: 909 787 4199
Fax: 909 787 4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: howard.judelson@ucr.edu.
Location/Qualifiers
Email: howard.judelson@ucr.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CV939489.1 GI:58129109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CV939489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fungi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PUBMED
COMMENT
```

JOURNAL

TITLE

FEATURES

ORIGIN

, RESULT 9

g

ò

RESULT 8 CV939489

셤

ઠે

```
CV937223 625-JAN-2005 PMrpcm_6974 mating of 88069 (A1) and 618 (A2) Phytophthora infestans cDNA, mRNA sequence.
                                                                                                                                                                   CV941703 618 bp mRNA linear EST 25-JAN-2005 PMrpct 4240 mating of 88069 (A1) and 618 (A2) Phytophthora infestans cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                          Randall,T., Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C., Kandall,T., Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C., Kalkar,H., Fong,A.M., Gates,K., Roberts,S., Yatzkan,E., Gaffney,T., Law,M., Testa,A., Toxto-Alalibo,A., Zhang,M., Zheng,L., Mueller,E., Windass,J., Binder,A., Birch,P.R.J., Gisi,U., Govers,F., Gow,N.A., Mauch,F., van Weet,P., Waugh,M.E., Yu,J., Boller,T., Kamoun,S., Lam,S.T. and Judelson, H.S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 625)
Randall,T. Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C.,
Randall,T. Fong,A.M., Gates,K., Roberts,S., Yatzkan,E., Gaffney,T.,
Law,M., Testa,A., Torto-Alalibo,A., Zhang,M., Zheng,L., Mueller,E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Large-scale gene discovery in the oomycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota, stramenopiles, Oomycetes, Pythiales, Pythiaceae,
Phytophthora.
                                                                                                                                                                                                                                                                                                        Phytophthora infestans (potato late blight agent)
Phytophthora infestans
Eukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (A1) and 618 (A2)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mol. Plant-Microbe Interact. 18 (3), 229-243 (2005) 15782637
Contact: Judelson HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 27; DB 8; Length 618;
Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Phytophthora infestans (potato late blight agent) Phytophthora infestans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Phytophthora infestans"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                    350 ACCAACGACGCCGGTGACGCACCACGTCGGC 384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Department of Plant Pathology
University of California
Webber Hall, Riverside, CA 92521, USA
Tel: 909 787 4199
Pax: 909 787 4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.0%; Scur.
85.7%; Pred. No. ...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sex="A1 and A2"
/clone lib="mating of 88069
/note="Vector: pSPORT1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/strain="88069 and 618"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: howard.judelson@ucr.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db xref="taxon:4787"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CV937223.
CV937223.1 GI:58126841
                                                                                                                                                                                                                                                               CV941703.1 GI:58131459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30; Conservative
                                                                                                                                                                                                                                                                                                                                                                              Phytophthora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
CV937223
                                                                                                                                 RESULT 12
CV941703
                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                         Š
                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CV901361 605 bp mRNA linear EST 25-JAN-2005 PB051E6 mycelium, sporulating growth Phytophthora infestans cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 605)
Randall,T., Dwyer,R.A., Huitema,E., Beyer,K., Cvitanich,C.,
Randall,T., Dwyer,D.W., Gates,K., Roberts,S., Yatzkan,E., Gaffney,T.,
Law,M., Testa,A., Torto-Alalibo,A., Zhang,M., Zheng,L., Mueller,E.,
Windass,J., Binder,A., Birch,P.R.J., Gisi,U., Govers,F., Gow,N.A.,
Mauch,F., van Weet,P., Waugh,M.E., Yu,J., Boller,T., Kamoun,S.,
Lam,S.T. and Judelson, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Large-scale gene discovery in the comycete Phytophthora infestans reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae; Phytophthora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                   /db_xref="taxon:4787"
/sexx="A1 and A2"
/lone lib="mating of 88069 (A1) and 618 (A2)"
/note="Vector: pSPORT1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 50.0%; Score 27; DB 8; Length 605; Best Local Similarity 85.7%; Pred. No. 21; Matches 30; Conservative 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                   Score 27; DB 8; Length 576; Pred. No. 21; 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mol. Plant-Microbe Interact. 18 (3), 229-243 (2005)
15782637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="Al"
/clone_lib="mycelium, sporulating growth"
/note="Vector: pSPORTI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Phytophthora infestans (potato late blight agent)
Phytophthora infestans
                                                                                                                                                                                                                 /organism="Phytophthora infeatans"
/mol_type="mRNA"
/strain="88069 and 618"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Phytophthora infestans"
|mol_type="mRNA"
|strain="88069"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  364 ACCAACGACGCGGCCGGTGACGCCACCTCGGC 398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
               Contract: Judelson HS
Department of Plant Pathology
University of California
Webber Hall, Riverside, CA 92521, USA
Tel: 909 787 4294
Fax: 909 787 4294
Email: howard, judelson@ucr.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Department of Plant Pathology
University of California
Webber Hall, Riverside, CA 92521, USA
Tel: 909 787 4199
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 50.0%; Score 27; Best Local Similarity 85.7%; Pred. No. 3 Matches 30; Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    howard.judelson@ucr.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      db_xref="taxon:4787"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
CV901361
CV901361.1 GI:58090859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Judelson HS
                                                                                                                                                                                                 1. .576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       fungi
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
ORGANISM
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CV901361
                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
```

셤 ઠ

successive number

ö

Gaps

ö

Length 635;

```
/db xxef="texon14787"
/dev stage="4-week old vegetative, non-sporulating
mycellum in synthetic medium"
mycellum in synthetic medium"
/lab host="8. coli, strain DH5-alpha"
/lab host="8. coli, strain DH5-alpha"
/lab host-"8. coli, strain DH5-alpha"
/lab host-"8. soli, strain DH5-alpha
/lab host-"8. soli, strain DH5-alpha
/lab host-"8. soli, strain DH5-alpha
/lab host-"8. soli, strain Synthetic medium. EST clones were
maded by their position in the microtiter plate, preceded
by the prefix M7 (for mycelial) and the successive number
of the microtiter plate (e.g. MY-06-A-04)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BE777047 637 bp mRNA linear EST 20-SEP-2000
MY-23-H-09 PinfestansMY Phytophthora infestans cDNA, mRNA sequence.
BE777047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratory of Phytopathology Wageningen University Wageningen University Binnenhaven 9, P.O.Box 8025, 6700 EE, Wageningen, The Netherlands Binnenhaven 9, P.O.Box 8025, 6700 EE, Wageningen, The Netherlands Pinnenhaven 31 317 483 318 Exercise 31 317 483 412 Email: Francine.Govers@medew.fyto.wau.nl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 637)
Kamoun, S., Hraber, P.T., Sobral, B.W.S., Nuss, D. and Govers, F.
Initial assessment of gene diversity for the comycete pathogen
Phytophthora infestans based on expressed sequences
Fungal Genet. Biol. 28 (2), 94-106 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Phytophthora infestans (potato late blight agent)
Phytophthora infestans
Bukaryota; stramenopiles; Oomycetes; Pythiales; Pythiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 50.0%; Score 27; DB 2; Length 637; Best Local Similarity 85.7%; Pred. No. 21; Matches 30; Conservative 0; Mismatches 5; Indels
   the prefix MY (for mycelial) and the sthe microtiter plate (e.g. MY-06-A-04).

    .637
    /organism="Phytophthora infestans"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/strain="DDR7602, Al mating type"
                                                                                                                                                                                                                                                                                                             329 ACCAACGACGGCCGGTGACGCACCACGTCGGC 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              329 Accaacgacgaccagacagacagacacaacaaca 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35
                                                                                                                                                                                                                                                                35
                                                                                                                              Score 27; DB 2;
Pred. No. 21;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC
                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search completed: May 4, 2006, 07:17:30 Job time: 3832.48 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BE777047.1 GI:10230702
                                                                                                                              ch 50.0%;
1 Similarity 85.7%;
30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Govers F
   of
of
                                                                                                                                     Query Match
Best Local Similarity
Matches 30; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BE777047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contractory of Phytopathology
Mageningen University
Mageningen University
Mageningen University
Binnenhaven 9, P.O. Box 8025, 6700 EB, Wageningen, The Netherlands
Tel: 31 317 483 138
Tel: 31 317 483 412
Bmail: Francine-Govers@medew.fyto.wau.nl.
Location/Qualifiers
1. 635
/ Organism="Phytophthora infestans"
/ mol_type="RPNA"
/ mol_type="RPNA"
/ db_xref="taxon:4787"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 20-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Windass, J., Binder, A., Birch, P.R.J., Gisi, U., Govers, P., Gow, N.A., Mauch, F., van West, P., Waugh, M.E., Yu, J., Boller, T., Kamoun, S., Lam, S.T., and Judelson, H.S.
Large-scale gene discovery in the comycete Phytophthora infestans
                                                                                                                                     reveals likely components of phytopathogenicity shared with true
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (Dases 1 to 635)
Kamoun, S., Hraber, P.T., Sobral, B.W.S., Nuss, D. and Govers, F.
Initial assessment of gene diversity for the comycete pathogen
Phytophthora infestans based on expressed sequences
Fungal Genet. Biol. 28 (2), 94-106 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bukaryota, stramenopiles, Oomycetes, Pythiales, Pythiaceae;
Phytophthora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="mating of 88069 (Al) and 618 (A2)"
/note="Vector: pSPORT1"
                                                                                                                                                             Mol. Plant-Microbe Interact. 18 (3), 229-243 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
50.0%; Score 27; DB 8; Length 625;
Best Local Similarity 85.7%; Pred. No. 21;
Matches 30; Conservative 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Phytophthora infestans (potato late blight agent)
Phytophthora infestans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Phytophthora infestans"
/mol_type="mRNA"
/mol_type="mRNA"
/db_xref="taxon.ang.197"
/db_xref="taxon.4787"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          332 ACCAACGACGGCCGGTGACGGCACCACGTCGGC 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATGACGTCGCCGGTGACGCCACCTCGTC 35
                                                                                                                                                                                                                                                         Contact: Judelson HS
Department of Plant Pathology
University of California
Webber Hall, Riverside, CA 92521, USA
Tel: 909 787 4199
Fax: 909 787 4294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: howard.judelson@ucr.edu.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE776273.1 GI:10229928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Govers F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10587472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                               JOURNAL
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14
BE776273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
```

ઠ

ö

Gaps

ô

```
4, 2006, 03:52:26; Search time 114.207 Seconds
(without alignments)
840.478 Million cell updates/sec
                                                                                                                                                                                                                                        US-10-789-758A-7
54
1 accgatgacgtcgccggtga......cgttttgtcgttttgtcgtt 54
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2606114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cgn2_6/ptodata/1/ina/1_COMB.seq:*
/cgn2_6/ptodata/1/ina/5_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/H_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/PCOMB.seq:*
/cgn2_6/ptodata/1/ina/PP_COMB.seq:*
/cgn2_6/ptodata/1/ina/PP_COMB.seq:*
/cgn2_6/ptodata/1/ina/RE_COMB.seq:*
/cgn2_6/ptodata/1/ina/AB_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                        1303057 seqs, 888780828 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                               - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                             IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq length: 0
seq length: 200000000
                                                                                                                                                Мау
                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB
Maximum DB
                                                                                               OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

STIMMARTE

		æ					
Result No.	Score	Query Match	Query Match Length	DB	ID	Description	
	31.8	58.9	45		US-09-672-126B-163	Sequence 163, App	
74	31.8	58.9	268	~	US-08-105-168B-1	1, A	
Ю	31.8	58.9		~	US-08-105-168B-2	6	
4	31.8	58.9	268	~	US-08-698-948-1	Sequence 1, Appli	
ហ	31.8		268	7	US-08-698-948-2	Sequence 2, Appli	
9	31.8			~	US-08-105-168B-23	23,	
7	31.8	58.9		~	US-08-698-948-23	Sequence 23, Appl	
80	31.8	58.9	342	~	US-08-473-020A-31	31,	
0	31.8	58.9	343	~	US-08-473-020A-4	4, 7	
10	31.8	58.9	350	7	US-08-105-168B-22	22,	
11	31.8	58.9	350	~	US-08-698-948-22	22,	
12	31.8	58.9	888	m	US-09-613-303-32	Sequence 32, Appl	
13	31.8	58.9	888	m	US-10-267-311-32	Sequence 32, Appl	
14	31.8	58.9	1623	m	US-09-613-303-3	3, A	
15	31.8	58.9	1623	ო	US-10-267-311-3	Sequence 3, Appli	
16	31.8	58.9	1623	ო	US-09-712-363-23	23,	
17	31.8	58.9	1920	m	US-09-613-303-16	16,	
18	31.8	58.9	1920	٣	US-10-267-311-16	16,	
19	31.8	58.9	1947	٣	US-09-613-303-28	Sequence 28, Appl	
50	31.8	58.9	1947	m	US-10-267-311-28	28,	
21	31.8	58.9	2073	٣	US-10-068-059-9	9, A	
22	31.8	58.9	2130	ო	US-10-068-059-7	Sequence 7, Appli	
23	31.8	58.9	2175	ო	US-10-068-059-11	Sequence 11, Appl	
24	31.8	58.9	2241	m	US-10-068-059-5	Sequence 5, Appli	

					010000	
	31.8	58.	2847	٣	US-10-267-311-20	Sequence 20, Ap
_	31.8	58.5	4380	m	US-08-955-565A-3	Sequence 3, Appl:
_	31.8	58.5	4403765	m	US-09-103-840A-2	Sequence 2, Ap
_	31.8	58.5	4411529	m	US-09-103-840A-1	Seguence 1, Appl
_	30.2	55.	3 268	~	US-08-105-168B-3	Sequence 3, App
	30.2	55.	3 268	N	US-08-698-948-3	Sequence 3, App
~	30	55.6	30	ო	US-09-690-921-3	Sequence 3, App.
33	30.	55.6	30	m	US-09-301-829A-3	Sequence 3, App
₩.	30	55.6	30	m	US-09-672-126B-164	Sequence 164, A
ın	28.6	53.0	268	~	US-08-105-168B-7	Sequence 7, Appl:
G	28.6	53.0	268	N	US-08-698-948-7	Sequence 7, Appl
7	28.6	53.0	342	~	US-08-473-020A-28	Sequence 28, Appl
6	28.6	53.(342	N	US-08-473-020A-30	Sequence 30, App]
σ.	28.6	53.		~	US-08-473-020A-3	Sequence 3, App
0	27	50.0	268	~	US-08-105-168B-5	Sequence 5, Appli
_	27	50.0		~	US-08-698-948-5	Sequence 5, App.
~	27	50.0	343	~	US-08-473-020A-5	Sequence 5, App.
<u> </u>	25.4	47.(1651	m	US-09-902-540-3255	Sequence 3255,
~ #	25.4	47.0	Н	ო	US-09-902-540-1150	Sequence 1150,
ın	24.4	45.	3 26	~	US-08-429-121B-49	Sequence 49, App.

ALIGNMENTS

Qy 1 ACCGATGACGTCGCCGGTGACGCCACGTCGTC 35
Db 1 ACCGATGACGTCGCCGGTGACGCCACCACGACGCC 35
RESULT 2
VS-08-105-168B-1

ö

US-08-105-168B-1
; Sequence 1, Application US/08105168B
; Sequence 1, Application US/08105168B
; Patent No. 5589585
; GRERRAL INFORMATION:
; TITLE OF INVENTION: DNA FRAGMENTS OF MYCOBACTERIA, AMPLIFICATION
; TITLE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DEI
; TITLE OF INVENTION: MYCOBACTERIA
; UNMBER OF SEQUENCES: 23
; CORRESPONDEMESS:
; CORRESPONDEMESS:
; ADDRESSER: Oliff & Berridge
; STREET: 700 South Washington Street, Suite 300

```
US-08-59-348-1

Sequence 1, Application US/08698948

Patent No. 5849901

GENERAL INPORMATION:

TITLE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DEITTLE OF INVENTION: MYCOBACTERIA, AMPLIFICATION

TITLE OF INVENTION: MYCOBACTERIA

TITLE OF INVENTION: MYCOBACTERIA

NUMBER OF SEQUENCES: 23

CORRESPONDENCES: 23

CORRESPONDENCES: 23

CORPUTER READALE FORM:

MEDIUM TYPE: 3.5" DS/HD

COMPUTER: IBM compatible

COMPUTER: AUGUST SYSTEM: MS DOS 3.1

SOFTWARE: Wordperfect

CURRENT APPLICATION DATA:

APPLICATION: 536

CLASSIFICATION: 536

CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 31.8; DB 2;
Pred. No. 0.015;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29 accearcacerceceercaceaceaceaceaces 63
             SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
FILING DATE: August 12, 1993
APPLICATION NUMBER: US/08/105,168B
CLASSIFICATION TAX:
APPLICATION NUMBER: US/08/105,168B
FILING DATE: August 8, 1992
ATTORNEY AGENT INFORMATION:
NAME: WILLIAM P. BERTIAGE
REGISTRATION NUMBER: 30,024
REGISTRATION NUMBER: 30,024
REGISTRATION NUMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB 28835
TELECOMMUNICATION INFORMATION:
TELEFAX: (703) 836-6400
TELEFAX: (703) 836-6400
TELEFAX: (703) 836-2787
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 268 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGINAL SOURCE:
ORGANISM: Mycobacterium microti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 94.3%;
Matches 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: 461-728
IDENTIFICATION METHOD:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-105-168B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
US-08-698-948-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA FRAGMENTS OF MYCOBACTERIA, AMPLIFICATION PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DET MYCOBACTERIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 94.3%; Pred. No. 0.015;
Matches 33; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Oliff & Berridge
700 South Washington Street, Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29 Acceandacenceccegneacecaccaceacec 63
                                                                                            MEDIUM TYPE: 3.5" DS/HD
COMPUTER: IBM compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/105,168B
CLASSIFICATION: 435
APPLICATION NUMBER: BP9210094
FILING DATE: ANGUST B, 1992
ATTONNEY,AGBNT INPORMATION:
NAME: William P Berridge
REGISTRATION NUMBER: WPB 28835
TELECHONE: (703) 836-6400
TELEPHONE: (703) 836-6400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Mycobacterium bovis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL:
ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: 461-728
IDENTIFICATION METHOD:
OTHER INFORMATION:
                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INDIVIDUAL ISOLATE
Alexandria,
                         Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-105-168B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-105-168B-2
```

ð

```
WESOUR 16-168B-23

Sequence 23, Application US/08105168B

Featent No. 5589585

GENERAL INFORMATION:

APPLICANT: MABLIAT et al.

APPLICANT: MABLIAT et al.

TITLE OF INVENTION: BRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DETTITLE OF INVENTION: MYCOBACTERIA

TITLE OF INVENTION: MYCOBACTERIA

TITLE OF INVENTION: MYCOBACTERIA

NUMBER OF SEQUENCES: 2

CORRESPONDENCE ADDRESS:

ADDRESSEE: 01iff & Berridge

STREE: Virginia

ZIP: 2214

COMPUTER READABLE FORM:

MEDIUM TYPE: 3.5" DS/HD

COMPUTER: IBM compatible

OPERATING SYSTEM: MS DOS 3.1

SOFTHMER: Wordderfect

COMPUTER: Alexandra, 435

MEDIUM TYPE: 3.5" DS/HD

COMPUTER: Alexandra, 435

MEDIUM TYPE: Alexandra, 435

PRICA PAPLICATION NUMBER: US/08/105,168B

CLASSIFICATION NUMBER: US/08/105,168B

FILING DATE: AUGUST F. FP9210094

FILING DATE: AUGUST F. PR9210094

FILING DATE: AUGUST F. PR9710N:

NAME: William P. MEATIGN:

NAME: William P. MEATIGN:

NAME: William P. MEATIGN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ch 58.9%; Score 31.8; DB 2; Length 268; 1. Similarity 94.3%; Pred. No. 0.015; 33; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29 ACCGATGACGTCGCCGGTGACGCCACCACGGCGC 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ACCGATGACGTCGCCGGTGACGCCACGTCGTC 35
               APPLICATION NUMBER: FR9210094
FILING DATE: August 8, 1992
ATTONEY AGENT INFORMATION:
NAME: William P. Berridge
REGISTRATION NUMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB 28835A
TELEPHONE: (703) 836-6400
TELEPAX: (703) 836-2707
INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS: LENGTH: 268 base pairs
TYPE: nucleic acid
TYPE: DOCKET NUMBER: STRANDENESS: single-stranded
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL:
ANTI-SENSE:
ORIGINAL SOURCE:
CREATER STRANDENES: CREATER SOURCE:
ORGANISM: Mycobacterium microti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: William P. Berridge
REGISTRATION NUMBER: 30,024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: 461-728
IDENTIFICATION METHOD:
OTHER INFORMATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POSITION IN GENOME:
CHROMOSOME/SEGMENT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 33; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAP POSITION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-698-948-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Second 2. Application US/0869898

Setent No. 5849901

GENERAL INFORMATION:
APPLICANT: MABILAT et al.
TITLE OF INVENTION: DNA FRAGMENTS OF MYCOBACTERIA, AMPLIFICATION
TITLE OF INVENTION: MYCOBACTERIA
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSE: Oliff & Berridge
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria,
STATE: Virginia
ZIP: 22114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 31.8; DB 2; Length 268;
Pred. No. 0.015;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29 Accearcacercececicacecaceaceaces 63
            APPLICATION WINDER: 08/105,168
FILING DATE: August 12, 1993
RICA APPLICATION DATE: 1993
APPLICATION WINDER: FR210094
FILING DATE: August 8, 1992
ATTORNEY, AGENT INFORMATION:
NAME: William P. Berridge
REGISTRATION NUMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB 28835A
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 268 base pairs
TYPE: nucleic acid
STRANDENESS: single-stranded
TOPOLOGY: linear
MUNICALIAN (9900)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 22314

COMPUTER READBLE FORM:
MEDIUM TYPE: 3.5" DS/HD
COMPUTER: 1BM compatible
OPERATING SYSTEM: MS DOS 3.1
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/698,948
FILING DATE: August 16, 1996
CLASSIPTCATION: 536
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: 08/105,168
FILING DATE: August 12, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HYPOTHETICAL:
ANTI-SENSE:
CNIGINAL SOURCE:
ORIGINAL Mycobacterium bovis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 94.3%;
Matches 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: 461-728
IDENTIFICATION METHOD:
OTHER INFORMATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INDIVIDUAL ISOLATE:
POSTITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSTITION:
FRATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-698-948-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-698-948-1
```

ઠે 셤

```
Sequence 11, Application US/08473020A

Sequence 11, Application US/08473020A

Sequence 11, Application US/08473020A

APPLICANT: Hance, Allan J

APPLICANT: Grandchamp-Desraux, Bernard

APPLICANT: Grandchamp-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 31.8; DB 2; Length 314;
Pred. No. 0.015;
0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/473,020A

FILING DATE: 06-JUN-1995

CLASSIFICATION DATA:

APPLICATION NUMBER: US 07/623,729

FILING DATE: 14-DEC-1990

ATORNEY/AGENT INFORMATION:

NAME: Dreger, Walter H

NAME: Dreger, Walter H

NAME: 24190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52 Acceatraacerceccestraceccaccaceaces 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: Walter H. Dreger
STREET: 4 Embarcadero Center, Suite 3400
STATE: California
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGINAL SOURCE:
ORGANISM: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPERENCE/DOCKET NUMBER: A54435
TELECOMMUNICATION INPORMATION:
TELEPHONE: (415) 78-1989
TELEPAX: (415) 398-3249
                                                                                                                                                                                                                 single-stranded
                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: DNA (genomic) HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 94.3%;
Matches 33; Conservative (
TELEFAX: (703) 836-2787 INFORMATION FOR SEQ ID NO: 2 SEQUENCE CHARACTERISTICS:
                                                                                                                                       : 314 base pairs
nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        i LOCATION: 438-751
IDENTIFICATION METHOD:
CTHER INFORMATION:
US-08-698-948-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
US-08-473-020A-31
                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                           ANTI-SENSE:
                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 23, Application US/0869898
| Patent No. 584991
| Patent No. 584991
| Patent No. 584991
| Patent No. 584991
| GENERAL INFORMATION |
| TITLE OF INVENTION | PRIMERS, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DET TITLE OF INVENTION | MYCOBACTERIA |
| TITLE OF INVENTION |
| TITLE OF INVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 58.9%; Score 31.8; DB 2; Length 314; Best Local Similarity 94.3%; Pred. No. 0.015; Matches 33; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52 ACCGATGACGTCGCCGGTGACGCACCACGACGGC 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Mycobacterium tuberculosis
STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/698,948
FILING DATE: August 16, 1996
CLASSIFFCATION: 336
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/105,168
FILING DATE: August 12, 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR9210094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: August 8, 1992
ATTORNEY/AGENT INPORMATION:
NAME: William P. Berridge
REGISTRATION NUMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB 28835A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 835-6400
             WPB 28835
                                           TELECOMMUNICATION INFORMATION:
TELEPRAX: (703) 836-5400
TELEPRAX: (703) 836-5767
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
LENGTH: 314 base pairs
TYPE: nucleic acid
STRANDEDNESS: single-stranded
                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) HYPOTHETICAL:
                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , IDENTIFICATION METHOD:
; OTHER INFORMATION:
US-08-105-168B-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-698-948-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANTI-SENSE:
```

ઠે

47 ACCGATGACGTCGCCGGTGACGCCACCACGACGGC 81

셤

31:

```
à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Levy-Frebault, Veronique
APPLICANT: Levy-Frebault, Veronique
APPLICANT: Gicquel, Brigitte
TITLE OF INVENTION: Mucleotide sequences of actinomycetales,
TITLE OF INVENTION: applications to the synthesis or detection of nucleic
TITLE OF INVENTION: application as immunogenic compositions.

NUMBER OF SEQUENCES: 31
CORRESPONDENCE ADDRESS:
ADDRESSEE: Walter H. Dreger
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 58.9%; Score 31.8; DB 2; Length 343; Best Local Similarity 94.3%; Pred. No. 0.015; Matches 33; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                        58.9%; Score 31.8; DB 2; Length 342; 94.3%; Pred. No. 0.015; Live 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/473,020A
FILING DATE: 06-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/0/623,729
FILING DATE: 14-DEC-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                   46 ACCGATGACGTCGCCGGTGACGCCACCACGACGCC 80
                                                                                                                                                                                                                                                                                                      1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Hance, Allan J
APPLICANT: Grandchamp-Desraux, Bernard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Dreger, Walter H
REGISTRATION NUMBER: 24190
REFERENCE/DOCKET NUMBER: A54435
TELECOMUNICATION:
TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 4, Application US/08473020A Patent No. 5877273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (415) 398-3249
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 343 base pairs
TYPE: nucleic acid
STRANDEDNESS: both
                                      LENGTH: 342 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                    Query Match
Best Local Similarity 94.37
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
LENGTH: 342 base pair:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 94111
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                                                                                                               TOPOLOGY: linear MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                            US-08-473-020A-31
                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-473-020A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-473-020A-4
                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                 셤
```

ö

Gaps

ö

1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 58.9%; Score 31.8; DB 2; Length 350; Best Local Similarity 94.3%; Pred. No. 0.015; Matches 33; Conservative 0; Mismatches 2; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2. 1 ACCGATGACGTCGCCGGTGACGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52 Acceardacerceccedraceccaccaceacec 86
                                                                                                                                                                                                                                             CITY: Alexandria,
STATE: Virginia
21P: 22314
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" DS/HD
COMPUTER: IBM compatible
OPERATING SYSTEM: MS DOS 3.1
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
FILING DATE: August 12, 1993
APPLICATION NUMBER: US/08/105,168B
CLASSIFTCATION DATA:
FILING DATE: August 8, 1992
APPLICATION DATA:
FILING DATE: August 8, 1992
ATTORNEY/AGENT INFORMATION:
NAME: William P. Berridge
REJERRENCE/DOCKET NUMBER: 30,024
REFERENCE/DOCKET NUMBER: 30,024
REFERENCE/DOCKET NUMBER: WPB 28835
TELECOMMUNICATION INFORMATION:
TELEFAX: (703) 836-2787
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
FENERAL OF ALEXANDRIANING.
SEQUENCE CHARACTERISTICS:
FENERAL OF ALEXANDRIANING.
FELESTAX: (703) 836-2787
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANTI-SENSE:
ORIGINAL SOURCE:
ORGANISM: Mycobacterium tuberculogis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
US-08-698-948-22
; Sequence 22, Application US/08698948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 350 base pairs
TYPE: nucleic acid
STRANDEDNESS: single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDENTIFICATION METHOD:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INDIVIDUAL ISOLATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHROMOSOME/SEGMENT: MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POSITION IN GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-105-168B-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       吕
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 32, Application US/10267311
Fatent No. 6657055
GREEAL INFORMATION:
APPLICANT: Siegel, Marvin
APPLICANT: Mizzen, Lee A.
TITLE OF INVENTION: INDUCTION OF A TH1-LIKE RESPONSE IN VITRO FILE REFERENCE: 12071/002201
CURRENT FILING DATE: 2002-10-09
FRICK PILING DATE: 2000-07-10
PRIOR PILING DATE: 2000-07-10
PRIOR PILING DATE: 1999-07-08
PRIOR PILING DATE: 1999-07-08
NUMBER OF SEQ ID NOS: 55
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ó;
              APPLICANT: Mizen, Lee A.

TITLE OF INVENTION: Lee A.

TITLE OF INVENTION: INDUCTION OF A TH1-LIKE RESPONSE IN VITRO CURRENT APPLICATION NUMBER: US/09/613,303

CURRENT APPLICATION NUMBER: US/09/613,303

CURRENT FILING DATE: 1909-07-08

NUMBER OF SEQ ID NOS: 55

SOFTWARE: FastSEQ for Windows Version 4.0

LENGTH: 988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 888;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 31.8; DB 3;
Pred. No. 0.018;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 31.8; DB 3;
Pred. No. 0.018;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   238 Accdardacercecedraacecaccaceacec 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238 Acceargacercecegraacecaccaceaceec 272
                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: fusion sequence
NAMES/KEY: CDS
1 LOCATION: (1)...(885)
US-09-613-303-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: fusion sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
US-09-613-303-3
; Sequence 3, Application US/09613303
; Patent No. 6495347
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.9%;
94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 94.3%;
Matches 33; Conservative (
                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 94.5%,
"...heg 33; Conservative
Chu, N. Randall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; LOCATION: (1)...(885)
US-10-267-311-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-267-311-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 32
LENGTH: 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                             DNA FRAGMENTS OF MYCOBACTERIA, AMPLIFICATION PRIMES, HYBRIDIZATION PROBES, REAGENTS AND METHOD FOR THE DET MYCOBACTERIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 58.9%; Score 31.8; DB 2; Length 350; Best Local Similarity 94.3%; Pred. No. 0.015; Matches 33; Conservative 0; Mismatches 2; Indels
         GENERAL INFORMATION:
APPLICANT: MABILAT et al.
TITLE OF INVENTION:
PRIMERS, HYBRIDIZATION PROBES, R.
TITLE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, R.
TITLE OF INVENTION: PRIMERS, HYBRIDIZATION PROBES, R.
TITLE OF INVENTION: MYCOBACTERIA
NUMBER OF SEQUENCES:
ADDRESSE: 016ff & Berridge
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria,
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria,
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria,
STREET: 710 South Washington Street, Suite 300
CITY: Alexandria,
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria,
STREET: 700 South Washington Street, Suite 300
CITY: Alexandria,
STREET: 710 South Washington Street, Suite 300
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" DS/HD
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" DS/HD
COMPUTER: IBM COMPACTION
SOFTWARE: Wordperfect
CURRENT APPLICATION NUMBER: 105, 1996
FILING APPLICATION NUMBER: PR9210094
FILING APPLICATION NUMBER: PR9210094
FILING DATE: AUGUST 8, 1992
ATTONEY/AGENT INFORMATION:
APPLICATION NUMBER: PR9210094
FILING DATE: AUGUST 8, 1992
ATTONEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52 ACCGATGACGTCGCCGGTGACGGCACCACGACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: William P. Berridge
REGISTRATION NUMBER: 30,024
REFERENCE/DOCKET NUMBER: 90,024
TELERAMINICATION INFORMATION:
TELEPAN: (703) 836-6400
INFORMATION FOR SEQ ID NO: 22: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ANTI-SENSE:
ORIGINAL SOURCE:
ORGANISM: Mycobacterium tuberculosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 32, Application US/09613303
Patent No. 6495347
GENERAL INFORMATION:
APPLICANT: Siegel, Marvin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 350 base pairs
TYPE: nucleic acid
STRANDEDNESS: single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , IDENTIFICATION: 438-787
, IDENTIFICATION METHOD:
, OTHER INFORMATION:
US-08-698-948-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ACCGATGACGTCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INDIVIDUAL ISOLATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-613-303-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/10267311

Fatent No. 6657055

GENERAL INFORMATION:
APPLICANT: Siegel, Marvin
APPLICANT: Siegel, Marvin
APPLICANT: Mizzen, Lee A.
TITLE OF INVENTION: INDUCTION OF A TH1-LIKE RESPONSE IN VITRO
FILE REFERENCE: 12071/002010
CURRENT APPLICATION NUMBER: US/10/267,311
CURRENT FILING DATE: 2002-10-09
FRIOR FILING DATE: 2000-07-10
FRIOR FILING DATE: 1999-07-08
FRIOR FILING DATE: 1999-07-08
NUMBER OF SEQ ID NOS: 55
SOFTWARE: FRREESEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 1623
TWENT OF THE OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 58.9%; Score 31.8; DB 3; Length 1623; Best Local Similarity 94.3%; Pred. No. 0.02; Matches 33; Conservative 0; Mismatches 2; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 58.9%; Score 31.8; DB 3; Length 1623; Best Local Similarity 94.3%; Pred. No. 0.02; Matches 33; Conservative 0; Mismatches 2; Indels 0.
APPLICANT: Chu, N. Randall
APPLICANT: Mizzen, Lee A.
TITLE OF INVENTION: INDUCTION OF A TH1-LIKE RESPONSE IN VITRO
FILE REFERENCE: 12071/002001
CURRENT APPLICATION NUMBER: US/09/613,303
CURRENT FILING DATE: 2000-07-10
PRIOR APPLICATION NUMBER: US 60/143,757
PRIOR PILING DATE: 1999-07-08
NUMBER OF SEQ ID NOS: 55
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 3
LENGTH: 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       238 ACCGATGACGTCGCCGGTGACGGCACCACGACGGC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           238 ACCGATGACGTCGCCGGTGACGGCACCACGACGGC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: fusion sequence
NAME/KEY: CDS
LOCATION: (1) ... (1620)
US-09-613-303-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: fusion sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)...(1620)
US-10-267-311-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
US-10-267-311-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

Search completed: May 4, 2006, 07:23:47 Job time : 119.207 secs This Page Blank (uspto)

```
4, 2006, 07:24:16 ; Search time 806.897 Seconds (without alignments) 553.412 Million cell updates/sec
                                                                                                                                                                            1 accgatgacgtcgccggtga......sgttttgtcgttttgtcgtt 54
                                                                                                                                                                                                                                                                                                                                                                                                                                    19587084
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                        9793542 seqs, 4134689005 residues
                                                                                                                                                                                                                                                                                                                                                                                                                         Published_Applications_NA_Main:*
                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                        - nucleic search, using sw model
                                                                                                                                                                                                                          Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                   seq length: 0
seq length: 200000000
                                                                                                                                        US-10-789-758A-7
54
                                                                                                                                                                                                        IDENTITY NUC
                                                                                      May
                                                                                                                                                                                                            Scoring table:
                                                                                                                                                              Perfect score:
                                                                                                                                                                                                                                                                                                                Minimum DB Maximum DB
                                                        OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                               Sequence:
                                                                                      Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Sequence 7, Appli	Sequence 163, App	Sequence 2, Appli	è,	Sequence 7, Appli	Sequence 12, Appl	Sequence 45, Appl	Sequence 32, Appl	Sequence 32, Appl	261	Sequence 23, Appl	Sequence 3, Appli	Sequence 28196, A	Sequence 3, Appli	Sequence 1, Appli	Sequence 16, Appl	Sequence 16, Appl	Sequence 28, Appl	28,	Sequence 9, Appli	Seguence 9, Appli	Sequence 7, Appli	Sequence 7, Appli
SUMMARIES	ID	US-10-789-758-7	US-11-056-463-163	US-10-500-586-2	US-10-500-586-6	US-10-500-586-7	US-10-500-586-12	US-10-500-586-45	US-10-267-311-32	US-10-679-956-32	US-10-282-122A-26142	US-09-712-363-23	US-10-267-311-3	US-10-282-122A-28196	US-10-679-956-3	US-10-635-211-1	US-10-267-311-16	US-10-679-956-16	US-10-267-311-28	US-10-679-956-28	US-10-068-059-9	US-10-941-049-9	US-10-068-059-7	US-10-941-049-7
	88	80	10	8	æ	œ	8	8	ល	σ	7	m	ß	7	σ	80	ß	σ	S	σ	S	0	S	σ
	Length	54	45	604	604	604	604	604	888	888	1620	1623	1623	1623	1623	1761	1920	1920	1947	1947	2073	2073	2130	2130
	Query Match	100.0	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9	58.9
	Score	54	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
	Result No.	-	7	m	4	Ŋ	9	7	æ	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23

Sequence 11, Appl Sequence 11, Appl Sequence 5, Appli	Sequence 20, Appl Sequence 20, Appl Sequence 648, App Sequence 648, App Sequence 648, App Sequence 648, App	4, 4, 6, 4, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,	Sequence 3, Appli Sequence 3, Appli Sequence 26, Appli Sequence 4, Appli Sequence 164, Appli Sequence 7, Appli
	5 US-10-267-311-20 6 US-10-679-956-20 6 US-10-080-170-648 7 US-10-080-170-648 8 US-10-468-356-648 B US-10-500-586-18	8 US-10-500-586-39 5 US-10-011-635A-6 6 US-10-304-616-4 6 US-10-379-164-3 6 US-10-233-902-7	7 US-10-339-3-5-3 7 US-10-333-448-3 8 US-10-478-188-3 8 US-10-4899-71-26 9 US-10-894-655-4 10 US-11-056-463-164 10 US-11-041-636-7
2175 2175 2241 2241	2847 2847 86114 86114 86114	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000000
88 88 88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8			, , , , , , , , , , , , , , , , , , ,
31.8 31.8 31.8	31.8 31.8 31.8 31.8		0000000
22 2 2 5 4 5 7 5 4 5 7 5 6 5 7 5 6 6 6 6 6 6 6 6 6 6 6 6 6	9 9 9 9 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		2 4 4 4 4 4 4 2 0 1 1 1 1 1 1 2 4 1

ALIGNMENTS

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTCTTTGTCGTTTTGTCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTTTTTGTCGTTTTTGTCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; Score 54; DB 8; Length 54; 100.0%; Pred. No. 6.7e-11; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Oligonucleotide containing a CpG motif US-10-789-758-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 163, Application US/11056463
Sequence 160, Mplication US/11056463
GENERAL INFORMATION:
APPLICANT: Hartmann, Gunther
APPLICANT: Bratzler, Robert L.
APPLICANT: Arthur
TITLE OF INVENTION: Methods Related to Immunostimulatory
                                                                          APPLICANT: Cohen, Joe
APPLICANT: Cohen, Joe
APPLICANT: Garcon, Nathalie
APPLICANT: Garcon, Nathalie
APPLICANT: Gerald
TITLE OF INVENTION: Vaccine
FILE REFERENCE: B45187
CURRENT APPLICATION NUMBER: US/10/789,758
CURRENT APPLICATION NUMBER: US/10/018,704
PRIOR APPLICATION NUMBER: PCT/EP00/05841
PRIOR APPLICATION NUMBER: PCT/EP00/05841
PRIOR APPLICATION NUMBER: GB 9915204.3
PRIOR FILING DATE: 1999-06-29
                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 7
SOFTWARE: FastSEQ for Windows Version 4.0
Sequence 7, Application US/10789758; Publication No. US20050002958A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0
Matches 54; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-11-056-463-163
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

```
Sequence 7, Application US/10500586

| Sequence 7, Application US/10500586
| Publication 0. US20050014157A1
| GENERAL INFORMATION:
| APPLICANT: KIM, Bum-Joon
| APPLICANT: KIM, Bum-Joon
| TITLE OF INVENTION: PRIMERS FOR AMPLIFYING HSP 65 GENE OF WYCOBACTERIAL SPECIES, HSP TITLE OF INVENTION: WITH THE SAME TITLE OF INVENTION: 65 GENE FRAGMENTS AND METHOD OF IDENTIFYING MYCOBACTERIAL SPECIE; TITLE OF INVENTION: 65 GENE FRAGMENTS AND METHOD OF IDENTIFYING MYCOBACTERIAL SPECIE; TITLE OF INVENTION: 05 GENE RAGENIES: 2004-06-30
| FILE REFERENCE: 05P021096KR COURENT APPLICATION NUMBER: KR 10-2002-004297 |
| PRIOR PILING DATE: 2002-01-24 |
| PRIOR PILING DATE: 2002-01-24 |
| PRIOR PILING DATE: 2002-03-05 |
| NUMBER OF SEQ ID NOS: 56 |
| SOFTHAME: Kopatentin 1.71 |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 6
US-10-500-586-12
Sequence 12, Application US/10500586
Publication No. US20050014157A1
GENERAL INFORMATION:
APPLICANT KIM, Bum-Joon
TITLE OF INVENTION: PRIMERS FOR AMPLIFYING HSP 65 GENE OF MYCOBACTERIAL SPECIES, HSP
TITLE OF INVENTION: WITH THE SAME
FILE REFERENCE: OPPO21096KR US/10/500,586
CURRENT APPLICATION NUMBER: US/10/500,586
CURRENT FILING DATE: 2004-06-30
PRIOR APPLICATION NUMBER: KR 10-2002-0004297
PRIOR APPLICATION NUMBER: KR 10-2002-0011648
PRIOR PRILING DATE: 2002-03-05
                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 604;
                                                                                                                                                                                                                                                                                                                                                                                    Length 604;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                 Query Match 58.9%; Score 31.8; DB 8; Best Local Similarity 94.3%; Pred. No. 0.029; Matches 33; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 31.8; DB 8;
Pred. No. 0.029;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ñ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56 Accearcacercecceercaceccaccacec 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56 Accearcacercecceercaceccaccacec 90
        CURRENT FILING DATE: 2004-06-30
PRIOR APPLICATION NUMBER: KR 10-2002-0004297
PRIOR FILING DATE: 2002-01-24
PRIOR APPLICATION NUMBER: KR 10-2002-0011648
PRIOR FILING DATE: 2002-03-05
SUMBER OF SEQ ID NOS: 56
SOFTWARE: KOPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; ORGANISM: Mycobaterium bovis BCG
US-10-500-586-7
                                                                                                                                                                                                                                                                                           ) ORGANISM: Mycobacterium bovis
US-10-500-586-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 94.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     33; Conservative
                                                                                                                                                                                                     SEQ ID NO 6
LENGTH: 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-500-586-7
                                                                                                                                                                                                                                                                    TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
US-10-560-566-2
US-10-560-566-2
Sequence 2, Application US/10500586
Publication No. US2005014157A1
GENERAL INFORMATION:
APPLICANT: BLOWENLAB CORPORATION:
TITLE OF INVENTION: 65 GENE FRACEINT AND METHOD OF IDENTIFYING MYCOBACTERIAL SPECIES;
TITLE OF INVENTION: WITH THE SAME
TITLE OF LING DATE: 2004-06-30
CURRENT APPLICATION NUMBER: US/10/500,586
CURRENT PILING DATE: 2002-01-24
PRIOR FILING DATE: 2002-01-24
PRIOR APPLICATION NUMBER: KR 10-2002-0011648
PRIOR APPLICATION NUMBER: KR 10-2002-0011648
PRIOR PILING DATE: 2002-03-05
SOFTWARE: KOPACHINI 1.71
SEQ ID NOS: 56
SEQ ID NO 2
LENGTH: 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6, Application US/10500586
Publication No. US20050014157A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: KID WE JOHN JOHN
APPLICANT: BIOMEDLAB CORPORATION
TITLE OF INVENTION: PRIMERS FOR AMPLIFYING HSP 65 GENE OF MYCOBACTERIAL SPECIES, HSP
TITLE OF INVENTION: 65 GENE FRAGMENTS AND METHOD OF IDENTIFYING MYCOBACTERIAL SPECIE
TITLE OF INVENTION: WITH THE SAME
TITLE REFERENCE: OPPO21096KR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
58.9%; Score 31.8; DB 8; Length 604;
Best Local Similarity 94.3%; Pred. No. 0.029;
Matches 33; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
TITLE OF INVENTION: Nucleic Acid-Induced Interferon FILE REFERENCE: C1039.70044US01
CURRENT APPLICATION NUMBER: US/11/056,463
CURRENT FILING DATE: 2005-02-11
PRIOR APPLICATION NUMBER: US 09/672,126
PRIOR APPLICATION NUMBER: US 60/156,147
PRIOR FILING DATE: 1999-09-27
NUMBER OF SEQ ID NOS: 169
SEQ ID NO 163
LENGTH: 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 58.9%; Score 31.8; DB 10; Best Local Similarity 94.3%; Pred. No. 0.022; Matches 33; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 Acceardacercecegraaceceaceaceaceace
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          se accarracercecestraceceaceaces 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                      , OTHER INFORMATION: Synthetic Oligonucleotide US-11-056-463-163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) ORGANISM: Mycobacterium africanum
US-10-500-586-2
                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-500-586-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

ઠે

g

ð

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IITLE OF INVENTION: Identification of Essential Genes in Microorganisms
                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-679-956-32
US-10-679-956-32
Sequence 32, Application US/10679956
PUblication No. US20050089841A1
GENERAL INFORMATION
APPLICANT: Siegel, Marvin
APPLICANT: Glu, N. Randall
APPLICANT: Mizzen, Lee A.;
TITLE OF INVENTION: INDUCTION OF A TH1-LIKE RESPONSE IN VITRO
FILE REFERENCE: 12071/002001
CURRENT PELLING DATE: 2003-10-06
PRIOR PAPLICATION NUMBER: US/09/613,303
PRIOR APPLICATION NUMBER: US 60/143,757
PRIOR APPLICATION NUMBER: US 60/143,757
PRIOR FILING DATE: 1999-07-08
NUMBER OF SEQ ID NOS: 55
SEQ ID NO 32
LENGTH: 888
LENGTH: 888
                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 31.8; DB 9; Length 888;
Pred. No. 0.03;
0; Mismatches 2; Indels (
                                                                                                                                                                                                    Length 888;
                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                 Score 31.8; DB 5;
Pred. No. 0.03;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                      238 ACCGATGACGTCGCCGGTGACGCACCACGACGGC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             238 Accearcacercececicacecececececes 272
                                                                                                                                                                                                                                                                                                               1 ACCGATGACGTCGCCGGTGACGCCACCTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 26442, Application US/10282122A Publication No. US20040029129A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
OTHER INFORMATION: fusion sequence
                                OTHER INFORMATION: fusion sequence
                                                                                                                                                                                                    58.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . Wang, Liangsu
. Zamudio, Carlos
. Malone, Cheryl
. Haselbeck, Robert
. Ohlsen, Kari
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zyskind, Judith
Wall, Daniel
Trawick, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yamamoto, Robert
Forsyth, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: ELITRA.034A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 94.3
Matches 33; Conservative
                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carr, Grant
                                                                                                                                                                            Query Match
Best Local Similarity
----- 33; Conserva
                                                           ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)...(885)
US-10-267-311-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; NAME/KBY: CDS
; LOCATION: (1)...(885)
US-10-679-956-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
US-10-282-122A-26142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WS-10-500-586-45

### Sequence 45, Application US/10500586

### Sequence 45, Application US/10500586

#### Sequence 45, Application US/10500586

#### Sequence 45, Application No. US20050014157A1

#### CENTERAL INFORMATION:

#### APPLICANT: BIOMEDIAB CORPORATION

#### TITLE OF INVENTION: ### SAME

#### TITLE OF INVENTION: #### TITLE INVENTION: ### TITLE INVENTION: ### TITLE INVENTION: ### TITLE INVENTION: ##
                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 32, Application US/10267311

Publication No. US20030050469A1

GENERAL INFORMATION:

APPLICANT: Siegel, Marvin

APPLICANT: Mizzen, Lee A.

TITLE OF INVENTION: INDUCTION OF A TH1-LIKE RESPONSE IN VITRO
FILE REFERENCE: 12071/002001

CURRENT APPLICATION NUMBER: US/10/267,311

CURRENT APPLICATION NUMBER: US/09/613,303

PRIOR PILING DATE: 2000-07-10

PRIOR PLICATION NUMBER: US 60/143,757

PRIOR PLICATION NUMBER: US 60/143,757

PRIOR PLICATION NUMBER: S5

NUMBER OF SEQ 1D NOS: 55

SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 58.9%; Score 31.8; DB 8; Length 604; Best Local Similarity 94.3%; Pred. No. 0.029; Matches 33; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                  Length 604;
                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                        8;
0.029;
2;
                                                                                                                                                                                                                         Score 31.8; DB 8;
Pred. No. 0.029;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56 ACCGATGACGTCGCCGGTGACGCCACCACGACGC 90
                                                                                                                                                                                                                                                                                                                                                                                 56 ACCGATGACGTCGCCGGTGACGCACCACGACGGC 90
                                                                                                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; TYPE: DNA; ORGANISM: Mycobacterium tuberculosis
US-10-500-586-45
                                                                                                                 ; TYPE: DNA
; ORGANISM: Mycobacterium microti
US-10-500-586-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                            Query Match
Best Local Similarity 94.3%;
Matches 33; Conservative
NUMBER OF SEQ ID NOS: 56
SOFTWARE: Kopatentin 1.71
SEQ ID NO 12
LENGTH: 604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-267-311-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 32
LENGTH: 888
                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
```

```
33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wall, Daniel
Trawick, John
Carr, Grant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1) ... (1620)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 13
US-10-282-122A-28196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-267-311-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
      SEQ ID NO 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                           음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-712-353-23

US-09-712-353-23

Patent No. US200201645881

Fatent No. US200201645881

GENERAL INFORMATION:

APPLICANT: Bisenberg, David

APPLICANT: Rotstein, Sergio H.

APPLICANT: Rotstein, Sergio H.

APPLICANT: Marcotte, Edward M.

TITLE OF INVENTION: DIFFERATIONS OF PROTEINS BY COMPARATIVE ANALYSIS

TITLE OF INVENTION: DIFFERATION OF PROTEINS BY COMPARATIVE ANALYSIS

FILE REFERENCE: 07419-03201

CURRENT FILING DATE: 2000-11-3

PRIOR PILING DATE: 2000-02-01

PRIOR PLILING DATE: 2000-02-01

PRIOR PLILING DATE: 1999-01-29

PRIOR PLILING DATE: 1999-02-01

PRIOR PLILING DATE: 1999-02-01

PRIOR PLILING DATE: 1999-03-26

PRIOR PLILING DATE: 1999-03-26

PRIOR PLILING DATE: 1999-05-14

PRIOR PLILING DATE: 1999-01-12

PRIOR PLING DATE: 1999-11-12

PRIOR PLING DATE: 1999-11-12

PRIOR PLING DATE: 1999-11-12

PRIOR PLING DATE: 1999-11-12

PRIOR PLING DATE: 1999-11-12
                                           VUNKENI FILLING DATE: 2003-02-20
PRIOR APPLICATION NUMBER: 60/191,076
PRIOR FILLING DATE: 2000-03-21
PRIOR PLICATION NUMBER: 60/206,848
PRIOR FILLING DATE: 2000-05-23
PRIOR FILLING DATE: 2000-05-26
PRIOR PILLING DATE: 2000-05-26
PRIOR PLING DATE: 2000-05-09
PRIOR PLING DATE: 2000-09-09
PRIOR PLING DATE: 2000-09-09
PRIOR PLING DATE: 2000-09-09
PRIOR PLING DATE: 2000-10-23
PRIOR PLING DATE: 2000-10-23
PRIOR PLING DATE: 2000-11-22
PRIOR PLING DATE: 2000-11-22
PRIOR PLING DATE: 2001-12-22
PRIOR PLING DATE: 2001-12-22
PRIOR PLING DATE: 2001-12-22
PRIOR PLING DATE: 2001-02-09
PRIOR PLING DATE: 2001-02-09
PRIOR PLING DATE: 2001-02-09
PRIOR PLING DATE: 2001-02-09
PRIOR PLING DATE: 2001-02-06
PRIOR PLING DATE: 2001-02-06
PRIOR PLING DATE: 2001-02-06
PRIOR PLING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 58.9%; Score 31.8; DB 7; Length 1620; Best Local Similarity 94.3%; Pred. No. 0.032; Matches 33; Conservative 0; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             238 Acceandacerceccesicaces 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
CURRENT APPLICATION NUMBER: US/10/282,122A CURRENT FILING DATE: 2003-02-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ) ORGANISM: Mycobacterium bovis
US-10-282-122A-26142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-712-363-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
ö
                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Xu, H.
TITLE OF INVENTION: Identification of Essential Genes in Microorganisms
FILE REFERENCE: ELITRA.034A
CURRENT APPLICATION NUMBER: US/10/282,122A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3, Application US/10267311
; Sequence 3, Application US/10267311
; Publication No. US20030050469A1
; GENERAL INFORMATION:
    APPLICANT: Siegel, Marvin
; APPLICANT: Siegel, Marvin
; APPLICANT: Chu, N. Randall
; APPLICANT: Mizzen, Lee A.
    TITLE OF INVENTION: INDUCTION OF A TH1-LIKE RESPONSE IN VITRO
; FILE REFERENCE: 12071/002011
; CURRENT APPLICATION NUMBER: US/109/613,303
; PRIOR PILING DATE: 2002-10-09
; PRIOR FILING DATE: 1999-07-08
; PRIOR FILING DATE: 1999-07-08
; NUMBER OF SEQ ID NOS: 55
; SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.9%; Score 31.8; DB 5; Length 1623; 94.3%; Pred. No. 0.032;
                                                                                                                           Length 1623;
                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                      Query Match 58.9%; Score 31.8; DB 3;
Best Local Similarity 94.3%; Pred. No. 0.032;
Matches 33; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                           238 Accelarcacercecrearescaceaceaces 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               238 ACCGATGACGTCGCCGGTGACGGCACCACGACGGC 272
                                                                                                                                                                                                                            1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 28196, Application US/10282122A Publication No. US20040029129A1 GENERAL INFORMATION:
; IENGTH: 1623
TYPE: DNA
; CRGANIGM: Mycobacterium tuberculosis
US-09-712-363-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: fusion sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Wang, Liangsu
APPLICANT: Zamudio, Carlos
APPLICANT: Malone, Cheryl
APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Kari
APPLICANT: Zyskind, Judith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yamamoto, Robert
Forsyth, R.
```

```
LENGTH: 1761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                              유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
CURRENT FILING DATE: 2003-02-20
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR PILING DATE: 2000-03-21
PRIOR PILING DATE: 2000-05-24
PRIOR PILING DATE: 2000-05-26
PRIOR PILING DATE: 2000-05-26
PRIOR PILING DATE: 2000-05-26
PRIOR PILING DATE: 2000-05-26
PRIOR PILING DATE: 2000-09-06
PRIOR PILING DATE: 2000-09-06
PRIOR PILING DATE: 2000-10-20
PRIOR PLING DATE: 2000-10-23
PRIOR PLING DATE: 2000-110-23
PRIOR PLING DATE: 2000-110-23
PRIOR PLING DATE: 2000-11-27
PRIOR PLING DATE: 2000-11-27
PRIOR PLING DATE: 2000-11-27
PRIOR PLING DATE: 2000-11-27
PRIOR PLING DATE: 2001-12-22
PRIOR PLING DATE: 2001-02-09
PRIOR PLING DATE: 2001-02-09
PRIOR PLING DATE: 2001-02-09
PRIOR PLING DATE: 2001-02-09
PRIOR PLING DATE: 2001-02-06
PRIOR PLING DATE: 2001-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14

US-10-679-56-3

i Sequence 3, Application US/10679956

i Publication No. US2005008941A1

i GENERAL INFORMATION:

APPLICANT: Siegl., Marvin

APPLICANT: Aizzen, Lee A.

TITLE OF INVENTION: INDUCTION OF A TH1-LIKE RESPONSE IN VITRO
FILE REFERENCE: 12071/002001

CURRENT FILING DATE: 12071/002001

CURRENT FILING DATE: 2000-07-10

PRIOR APPLICATION NUMBER: US/09/613,303

PRIOR FILING DATE: 2000-07-10

PRIOR FILING DATE: 2000-07-10

PRIOR FILING DATE: 1999-07-08

NUMBER OF SEQ ID NOS: 55

SEQ ID NO 3

LENGTH: 1623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 58.9%; Score 31.8; DB 7; Length 1623; Best Local Similarity 94.3%; Pred. No. 0.032; Matches 33; Conservative 0; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 58.9%; Score 31.8; DB 9; Length 1623; Best Local Similarity 94.3%; Pred. No. 0.032; Matches 33; Conservative 0; Mismatches 2; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        238 ACCGATGACGTCGCCGGTGACGCACCACGACGC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; TYPE: DNA
; ORGANISM: Mycobacterium tuberculosis
US-10-282-122A-28196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: fusion sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY: CDS
; LOCATION: (1)...(1620)
US-10-679-956-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
```

1 ACCGATGACGTCGCCGGTGACGGCACCACGTCGTC 35

```
Sequence 1, Application US/10635211;
Sequence 1, Application US/10635211;
Publication No. US20050031649A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: A recombinant fusion protein comprising BCG heat shock protein 65;
TITLE OF INVENTION: And the epitope of MUC1
TITLE OF INVENTION: and the epitope of MUC1
TITLE REPERENCE: PP030012US
CURRENT APPLICATION NUMBER: US/10/635,211
CURRENT PILING DATE: 2003-08-06
SOFTWARE: PATCHING UNOS: 9
SOFTWARE: PATCHING VARIANCE OF SEQ ID NOS: 9
SOFTWARE: PATCHING VARIANCE OF SEQ ID NOS: 9
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 31.8; DB 8; Length 1761;
Pred. No. 0.032;
0; Mismatches 2; Indels 0;
238 ACCGATGACGTCGCCGGTGACGGCACCACGACGGC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238 ACCGATGACGTCGCCGGTGACGCACCACGACGGC 272
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ACCGATGACGTCGCCGGTGACGCCACCACGTCGTC 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Search completed: May 4, 2006, 09:01:03 Job time: 808.897 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
OTHER INFORMATION: Recombinant gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 58.9%;
Best Local Similarity 94.3%;
Matches 33; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: CDS
; LOCATION: (1)..(1761)
US-10-635-211-1
```

This Page Blank (uspto)

Sequence 1, Applisequence 862, App Sequence 862, App Sequence 411, App Sequence 7, Applisequence 12, Applisequence 123, App Sequence 123, App Sequence 189, App Sequence 1, Applisequence 1, Appl

5, Appli 26, Appli 3, Appli 9, Appli 2, Appli 8, Appli 1, Appli

Sequence 2 Sequence 8 Sequence 5

Sequence 3 Sequence 3 Sequence 9

Sequence Sequence Sequence Sequence Sequence Sequence

Sequence

Sequence 312, App Sequence 5, Appli Sequence 143, App Sequence 63350, A Sequence 164588, Sequence 777997,

ö

Gaps

ö

Score

Result

Perfect score:

Sequence:

OM nucleic

ë

Run

Scoring table:

Minimum DB Maximum DB

Database

```
; OTHER INFORMATION: synthetic immunostimulatory oligonucleotide US-10-469-561-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-301-480-164588
US-10-301-480-777997
US-11-127-654-343

US-11-127-654-347

US-11-127-654-399

US-11-161-140-285

US-11-161-140-285

US-11-161-140-285

US-11-161-324-5

US-11-161-324-5

US-11-181-325-9

US-11-183-253-9

US-11-183-253-9

US-11-183-253-9

US-11-127-654-295

US-11-127-654-398

US-10-633-634-31

US-10-633-634-31

US-10-633-634-31

US-10-121-633-633-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-925-065A-63350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 55.6%; Score 30; DB 10; Best Local Similarity 100.0%; Pred. No. 0.015; Matches 30; Conservative 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 7, Application US/10469561
Sequence 7, Application US/10469561
Publication No. US2050260216A1
GENERAL INFORMATION:
APPLICANT: Claire Ashman
APPLICANT: Claire Ashman
APPLICANT: James Scott Crowe
APPLICANT: Alan Perer Lewis
TITLE OF INVENTION: VACCINE
FILE REFERENCE: P44355USW
CURRENT APPLICATION NUMBER: US/10/469,561
CURRENT PELING DATE: 2003-08-29
NUMBER OF SEQ ID NOS: 25
SEQ ID NO 7
LENGTH: 30
LENGTH: 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ACCGATGACGTCGCCGGTGACGCCACCACG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ACCGATGACGTCGCCGGTGACGCCACC 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-741-720A-25

"Sequence 25, Application US/10741720A
; Publication No. US20060058254A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 92, Appl
Sequence 22, Appl
Sequence 22, Appl
Sequence 6, Appl
Sequence 46, Appl
Sequence 46, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 238, App
Sequence 253, App
Sequence 290, App
Sequence 294, App
Sequence 341, App
                                                                                                                               May 4, 2006, 08:17:52 ; Search time 1232.38 Seconds (without alignments) 178.449 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 7, Ap
Sequence 25, A
Sequence 92, A
Sequence 8, Ap
Sequence 22, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Description
                                                                                                                                                                                                          US-10-789-758A-7
54
1 accgatgacgtcgccggtga......cgttttgtcgttttgtcgtt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Published Applications NA New:*

1: /SIDS5/ptodata/2/pubpna/US08_NEW_PUB.seq1:*
2: /SIDS5/ptodata/2/pubpna/US08_NEW_PUB.seq:*
3: /SIDS5/ptodata/2/pubpna/US08_NEW_PUB.seq:*
4: /SIDS5/ptodata/2/pubpna/US08_NEW_PUB.seq:*
5: /SIDS5/ptodata/2/pubpna/US08_NEW_PUB.seq:*
6: /SIDS5/ptodata/2/pubpna/US09_NEW_PUB.seq:*
7: /SIDS5/ptodata/2/pubpna/US09_NEW_PUB.seq:*
8: /SIDS5/ptodata/2/pubpna/US09_NEW_PUB.seq:*
9: /SIDS5/ptodata/2/pubpna/US09_NEW_PUB.seq:*
10: /SIDS5/ptodata/2/pubpna/US10_NEW_PUB.seq2:*
11: /SIDS5/ptodata/2/pubpna/US10_NEW_PUB.seq2:*
12: /SIDS5/ptodata/2/pubpna/US10_NEW_PUB.seq2:*
13: /SIDS5/ptodata/2/pubpna/US10_NEW_PUB.seq2:*
14: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq2:*
15: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq2:*
16: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq2:*
17: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq3:*
18: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq4:*
18: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq4:*
18: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq6:*
19: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq6:*
19: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq6:*
19: /SIDS5/ptodata/2/pubpna/US11_NEW_PUB.seq6:*
                    GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-469-561-7

US-10-741-720A-25

US-10-741-720A-92

US-10-8-475-8

US-10-497-591A-22

US-10-469-561-8

US-10-619-27-46

US-10-619-27-46

US-10-741-720A-3

US-11-127-654-253

US-11-127-654-290

US-11-127-654-290

US-11-127-654-290

US-11-127-654-290

US-11-127-654-290
                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                  9306428 seqs, 2036268586 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                             nucleic search, using sw model
                                                                                                                                                                                                                                                                                        IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
```

```
RESULT 6
US-10-469-561-8
                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 92, Application US/10741720A
| Publication No. US20060058254A1
| GENERAL INFORMATION:
| APPLICANT: PRORMATION:
| APPLICANT: PRAKON, Karen L.
| ARPLICANT: MASSHALL, Jason
| TITLE OF INVENTION: INMUNOSITIONING METHODS OF USING THE SAME
| TITLE OF INVENTION: OLIGONUCLEOTIDES AND METHODS OF USING THE SAME
| TITLE OF INVENTION: OLIGONUCLEOTIDES AND METHODS OF USING THE SAME
| TITLE OF INVENTION: OLIGONUCLEOTIDES AND METHODS OF USING THE SAME
| TITLE OF INVENTION: UMBER: US 60/436,122
| TITLE OF INVENTION NUMBER: US 60/436,122
| PRIOR PELICATION NUMBER: US 60/447,885
| PRIOR APPLICATION NUMBER: US 60/447,885
| PRIOR APPLICATION NUMBER: US 60/447,885
| PRIOR APPLICATION NUMBER: US 60/447,885
| PRIOR PILING DATE: 2003-02-13
| PRIOR FILING DATE: 2003-05-01
| NUMBER OF SEQ ID NOS: 227
| SEQ ID NO 92
| LENGTH: 30
APPLICANT: DINA, Dino
APPLICANT: FEARON, Karen L.
APPLICANT: FEARON, Karen L.
APPLICANT: MASSHALL, Jascon
TITLE OF INVENTION: IMMUNOSTIMULATORY SEQUENCE
TITLE OF INVENTION: OLICOMUCLEOTIDES AND METHODS OF USING THE SAME
FILE REFERENCE: 377882003300
CURRENT PAPLICATION NUMBER: US/10/741,720A
CURRENT FILING DATE: 2003-12-18
PRIOR APPLICATION NUMBER: US 60/436,122
PRIOR APPLICATION NUMBER: US 60/447,885
PRIOR APPLICATION NUMBER: US 60/447,885
PRIOR PILING DATE: 2003-02-13
PRIOR FILING DATE: 2003-05-01
PRIOR FILING DATE: 2003-05-01
SPRIOR FILING DATE: 2003-05-01
SPRIOR FILING DATE: 2003-05-01
SPRIOR FILING DATE: 2003-05-01
SPRIOR PILING DATE: 2003-05-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 49.6%; Score 26.8; DB 12;
Best Local Similarity 93.3%; Pred. No. 0.31;
Matches 28; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
49.6%; Score 26.8; DB 12;
Best Local Similarity 93.3%; Pred. No. 0.31;
Matches 28; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ACCGATAACGTTGCCGGTGACGCCACCACG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ACCGATGACGTCGCCGGTGACGGCACCACG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ACCGATGACGTCGCCGGTGACGCCACG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ACCGATAACGTTGCCGGTGACGCCACCACG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:

CTHER INPORMATION: Synthetic construct

US-10-741-720A-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ) OTHER INFORMATION: Synthetic construct US-10-741-720A-92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-741-720A-92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
```

RESULT 4 US-10-835-475-8

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
Sequence 8, Application US/10835475
Publication No. US2005024410A1
SPEREAL INFORMATION:
APPLICANT: Centocor, Inc.
TITLE OF INVENTION: Toll-Like Receptor Binding Agents and Uses Thereof
FILE REPERENCE: CEN5022 USNP
CURRENT PAPLICATION UNBER: US/10/835,475
CURRENT FILING DATE: 2004-04-29
NUMBER OF SEQ ID NOS: 11
SEQ ID NO 8
LENGTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-10-497-591A-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: SCHMIDT, WALTER
APPLICANT: SCHMIDT, WALTER
APPLICANT: SCHMIDT, CAROLA
APPLICANT: ESYED, ALENA
APPLICANT: ESYED, ALENA
TITLE OF INVENTION: IMMUNOSTIMULATORY OLIGODEOXYNUCLEOTIDES
TITLE OF INVENTION: IMMUNOSTIMULATORY OLIGODEOXYNUCLEOTIDES
CURRENT FILING DATE: 2004-06-03
CURRENT FILING DATE: 2004-06-03
PRIOR APPLICATION NUMBER: PCT/EP02/13791
PRIOR APPLICATION NUMBER: A 1924/2001
PRIOR APPLICATION NUMBER: A 1924/2001
PRIOR SEQ ID NOS: 113
SOFTWARE: PATENTING DATE: 2001-12-07
NUMBER OF SEQ ID NOS: 113
SOFTWARE: PATENTING DATE: 2001-12-07
NUMBER OF SEQ ID NOS: 13
SEQ ID NO 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        / Match 44.4%; Score 24; DB 10; Length 24; Local Similarity 100.0%; Pred. No. 4.5; nes 24; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
44.4%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 4.5;
Matches 24; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31 TCGTCGTTTTGTCGTTT 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 regrestriristestriristestr 24
                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial
FRATURE:
CTHER INFORMATION: Oligodinucleotide
US-10-835-475-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-497-591A-22

Sequence 22, Application US/10497591A

Publication No. US20050250716A1

GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 TCGTCGTTTTGTCGTTTTGTCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 8, Application US/10469561
Publication No. US20050260216A1
GENERAL INFORMATION:
APPLICANT: Claire Ashman
APPLICANT: James Scott Crowe
APPLICANT: Jonathan Henry Ellis
APPLICANT: Alan Peter Lewis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Artificial Sequence
```

```
PRIOR APPLICATION NUMBER: US 09/630,319
PRIOR FILING DATE: 2000-07-31
PRIOR PLING DATE: 1997-10-30
PRIOR FILING DATE: 1997-10-30
PRIOR FILING DATE: 1996-10-30
PRIOR APPLICATION NUMBER: US 08/738,652
PRIOR APPLICATION NUMBER: US 08/386,063
PRIOR APPLICATION NUMBER: US 08/276,358
PRIOR FILING DATE: 1995-02-07
PRIOR FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 124
SOFTWARE: FASELSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 resterringrestrings 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Sequence 238, Application US/11127654; Publication No. US20050250726A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31 TCGTCGTTTTGTCGTTTTGTCGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 rcgrcgrrrrgrcgrrrgrcgrr
                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; APPLICANT: Krieg, Arthur M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31 TCGTCGTTTTGTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-11-127-654-238
                                                                                                                                                                                                                                                                                             SEQ ID NO 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Krieg, Archur M.
TITLE OF INVENTION: Immanostimulatory Nucleic Acid Molecules
FILE REFERENCE: C1039/7023/HCL.
CURRENT APPLICATION NUMBER: US/10/619,279
CURRENT FILING DATE: 2003-07-14
FRIOR APPLICATION NUMBER: US 08/960,774
FRIOR APPLICATION NUMBER: US 08/960,774
FRIOR FILING DATE: 1997-10-30
FRIOR FILING DATE: 1997-10-30
FRIOR PELING DATE: 1995-20-07
FRIOR PELING DATE: 1995-02-07
FRIOR FILING DATE: 1995-02-07
FRIOR FILING DATE: 1995-02-07
FRIOR FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 123
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 24
                                                                                                                                                                                                                                          FEATURE:
; OTHER INFORMATION: synthetic immunostimulatory oligonucleotide
US-10-469-561-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
44.4%; Score 24; DB 10; Length 24;
Best Local Similarity 100.0%; Pred. No. 4.5;
Matches 24; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                          DB 10; Length 24; 4.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-382-822-46
; Sequence 46, Application US/10382822
; Sequence 46, Application US/10382822
; Publication No. US20060058251A1
; GENERAL INFORMATION:
    APPLICANT: Krieg, Arthur M.
    APPLICANT: Klinman, Dennis
    APPLICANT: Steinberg, Alfred D.
    TITLE OF INVENTION: Methods for Treating and Preventing
    TITLE OF INVENTION: Infectious Disease
    FILE REFERENCE: C01039-70062-US
    CURRENT APPLICATION NUMBER: US/10/382,822
; CURRENT FILING DATE: 2003-03-06
                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Synthetic Oligonucleotide US-10-619-279-46
                                                                                                                                                                                                                                                                                                                                          Query Match

44.4%; Score 24; DB
Best Local Similarity 100.0%; Pred. No. 4.5
Matches 24; Conservative 0; Mismatches
                                             CURRENT APPLICATION NUMBER: US/10/469,561
CURRENT FILING DATE: 2003-08-29
NUMBER OF SEQ ID NOS: 25
SSCTWARE: PastSEQ for Windows Version 4.0
LENGTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                          31 TCGTCGTTTTGTCGTT 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCGTCGTTTTGTCGTTTTGTCGTT 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31 TCGTCGTTTTGTCGTTTGTCGTT 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 regregirance certareser 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-619-279-46

Sequence 46, Application US/10619279
Publication No. US20050267057A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
  TITLE OF INVENTION: VACCINE FILE REFERENCE: PG4355USW
                                                                                                                                                                                          TYPE: DNA
ORGANISM: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                         Sequence 3, Application US/10741720A
| Sequence 3, Application US/10741720A
| Publication No. US20060058254A1
| GENERAL INFORMATION:
| APPLICANT: DINA, Dino
| APPLICANT: PEARCN, Karen L.
| APPLICANT: MARSHALL, Jason
| TITLE OF INVENTION: OLIGONUCLEOTIDES AND METHODS OF USING THE SAME
| TITLE OF INVENTION: OLIGONUCLEOTIDES AND METHODS OF USING THE SAME
| FILE REPRENCE: 37788203300
| CURRENT APPLICATION NUMBER: US/10/741,720A
| CURRENT FILING DATE: 2003-12-18
| PRIOR FILING DATE: 2003-12-23
| PRIOR PILING DATE: 2003-02-13
| PRIOR PILING DATE: 2003-02-13
| PRIOR PILING DATE: 2003-05-01
| NUMBER OF SEQ ID NOS: 227
| SOFTWARE: FASTSEQ for Windows Version 4.0
| LENGTH: 24
                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                         ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                     44.4%; Score 24; DB 12; Length 24; 100.0%; Pred. No. 4.5; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match

44.4%; Score 24; DB 12;
Best Local Similarity 100.0%; Pred. No. 4.5;
Matches 24; Conservative 0; Mismatches 0
; OTHER INFORMATION: Synthetic Oligonucleotide US-10-382-822-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Synthetic construct US-10-741-720A-3
```

```
Sequence 294, Application US/11127654

Sequence 294, Application No. US20050250726A1

GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: INFLAMMATORY DISEASE
FILE REFERENCE: C1039,70060US01

TITLE OF INVENTION: INFLAMMATORY DISEASE
FILE REFERENCE: C1039,70060US01

CURRENT PPLICATION NUMBER: US,11/127,654

CURRENT FILING DATE: 2005-05-12

PRIOR APPLICATION NUMBER: US 10/112,653

PRIOR FILING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFFWARE: PatentIn version 3.2

SEQ ID NO 294

LENTH: 24

LENTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 44.4%; Score 24; DB 17; Length 24; Best Local Similarity 100.0%; Pred. No. 4.5; Matches 24; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          DB 17; Length 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                  ) OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0%; Pred. No. 4.5
Matches 24; Conservative 0; Mismatches
FILE REFERENCE: C1039.70060US01
CURRENT APPLICATION NUMBER: US/11/127,654
CURRENT FILING DATE: 2005-05-12
FRIOR APPLICATION NUMBER: US 10/112,653
PRIOR FILING DATE: 2002-03-29
PRIOR FILING DATE: 2002-03-29
NUMBER OF SEQ ID NOS: 1040
SOFTWARE: Patentin Version 3.2
LENGTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCGTCGTTTTGTCGTTTTGTCGTT 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31 TCGTCGTTTTGTCGTTTTGTCGTT 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31 TCGTCGTTTTGTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: modified base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: modified base
LOCATION: (13)..(13)
OTHER INFORMATION: m5c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: modified base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: modified base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; LOCATION: (21)..(21)
; OTHER INFORMATION: m5c
US-11-127-654-294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: (2)..(2) __OTHER INFORMATION: m5c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (5)..(5) OTHER INFORMATION: mSc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-11-127-654-294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: IMMUNOSTIMULATORY DISEASES
FILE REFERENCE: C1039.70060US01
CURRENT APPLICATION NUMBER: US 11/1127,654
CURRENT PEPLICATION NUMBER: US 10/112,653
PRIOR APPLICATION NUMBER: US 60/279,642
PRIOR PILING DATE: 2002-03-29
PRIOR FILING DATE: 2001-03-29
PRIOR FILING DATE: 2001-03-29
SUGDEN OF SEQ ID NOS: 1040
SEQ ID NOS: 1040
SEQ ID NO 253
LENGTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 290, Application US/11127654
Publication No. US2055025671
GRNERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Barg, Daniel J.
TITLE OF INVENTION: INFLAMMATORY DISEASES
TITLE OF INVENTION: INFLAMMATORY DISEASES
APPLICANT: Berg, Daniel J.
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC
TITLE OF INVENTION: INFLAMMATORY DISEASES
FILE OF INVENTION: 1012AMATORY DISEASES
FILE REPERENCE: C1033.1076C0US01
CURRENT PPLICATION NUMBER: US/11/127,654
CURRENT FILING DATE: 2005-03-12
PRIOR PPLICATION NUMBER: US 60/279,642
PRIOR FILING DATE: 2001-03-29
NUMBER OF SEQ ID NOS: 1040
SEQ ID NO 238
LENGTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
44.4%; Score 24; DB 17; Length 24;
Best Local Similarity 100.0%; Pred. No. 4.5;
Matches 24; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 17; Length 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE: OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ) OTHER INFORMATION: Synthetic oligonucleotide US-11-127-654-253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match

44.4%; Score 24; DB
Best Local Similarity 100.0%; Pred. No. 4.5
Matches 24; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 resrectrirerestrirerestr 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31 TCGTCGTTTTGTCGTTTGTCGTT 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Sequence 253, Application US/11127654
; Publication No. US20050250726A1
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-127-654-238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
```

```
ઠે
                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 343, Application US/11127654
; Sequence 343, Application US/11127654
; Publication No. US20050250726A1
; GENERAL INFORMATION:
; APPLICANT: Krieg, Arrhur M.
; APPLICANT: Krieg, Dankel J.
; TITLE OF INVENTION: INFLAMMATORY NUCLEIC ACID FOR TREATMENT OF NON-ALLERGIC
; TITLE OF INVENTION: INFLAMMATORY DISEASES
; FILE REPERENCE: C1039,7006001801
; CURRENT FILING DATE: 2005-05-12
; PRIOR FILING DATE: 2001-03-29
; PRIOR PILING DATE: 2001-03-29
; NUMBER: OF SEQ ID NOS: 1040
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 343
; LENGTH: 24
                                                                                                        Sequence 341, Application US/11127654

Publication No. US2005020726A1

Sequence 341, Application US/11127654

Publication No. US2005020726A1

GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

APPLICANT: Berg, Daniel J.

TITLE OF INVENTION: INFLAMMATORY DISEASES

FILE REFERENCE: C1039.70060US01

CURRENT APPLICATION NUMBER: US/11/127,654

CURRENT PILING DATE: 2005-05-12

PRIOR APPLICATION NUMBER: US 10/112,653

PRIOR PILING DATE: 2001-03-29

PRIOR PILING DATE: 2001-03-29

NUMBER OF SEQ ID NOS: 1040

SOFTWARE: Patentin version 3.2

LENGTH: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 44.4%; Score 24; DB 17; Length 24; Best Local Similarity 100.0%; Pred. No. 4.5; Matches 24; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCGTCGTTTTGTCGTTTTGTCGTT 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31 TCGTCGTTTTGTCGTTTGTCGTT 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PEATURE:
NAME/KEY: misc feature
LOCATION: (24) ... (24)
OTHER INFORMATION: biotinylated
US-11-127-654-341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: modified_base;
COCATION: (2)..(2);
COTHER INFORMATION: m5c
US-11-127-654-343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
US-11-127-654-343
                                                                                                   US-11-127-654-341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
Gaps
                                                  ö
Query Match 44.4%; Score 24; DB 17; Length 24; Best Local Similarity 100.0%; Pred. No. 4.5; Matches 24; Conservative 0; Mismatches 0; Indels
                                                                                                   54
                                                                                                                                              1 rccrccrrrrercerrrrercerr 24
```

Search completed: May 4, 2006, 10:07:23 Job time : 1233.38 secs

This Page Blank (uspto)

motif motif motif oligo

Copyright

Мау

Run on:

OM nucleic

Perfect score:

Sequence:

Scoring table:

```
Oligonucleotides containing at least 1 unmethylated CpG dinucleotide affect the immune response in a subject by activating natural killer cells or redirecting a subject of immune response from a Th2 to a Th1 response by inducing monocytic and other cells to produce Th1 cytokines. These nucleic acids containing at least 1 unmethylated CpG can be used as
      Aa299004 CpG motif
Aa247601 Murine im
Aac64136 Immunosti
Aab10390 CpG motif
Aah20392 CpG motif
Aah12260 CpG motif
Aah12260 CpG immunosti
Aaf59506 Immunosti
Aaf59506 Immunosti
Aaf59748 Immunosti
Aaf99748 Immunosti
Aaf99752 Immunosti
Aaf99752 Immunosti
Aaf99754 Immunosti
                                                                                                                                                                                                                                                                                                                                                                                                                        Unmethylated cytosine-guanine dinucleotide containing oligonucleotide 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                           ss; unmethylated CpG dinucleotide; immune response; natural killer cell; Th2 response; Th1 response; Th1 cytokine; hepatitis B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Use of oligonucleotides containing an unmethylated CpG dinucleotide - useful as, e.g. adjuvant with antigen, or nucleic acid encoding antigen for inducing immune response in subject.
                                                                                                                                                                                                                                                                                                     ALIGNMENTS
                             AAC60277
AAC64136
AAC64136
AAC64136
AAH20392
AAH19260
AAF99605
AAF99742
AAF99752
AAF99752
AAF99752
AAF99753
AAF99754
        AAZ99004
AAZ47601
                                                                                                                                                                                                                                                                    AAF99749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTTA-) OTTAWA CIVIC LOEB RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 14; Page 35; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-US004703.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-0040376P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (QIAG-) QIAGEN GMBH.
(IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                       AAV60950 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
Davis HL, Schorr J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1998-520792/44.
WO9840100-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                  14-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
 AAV60950;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    useful
                                                                                                                                                                                                                                                                                                                                                AAV60950
Aav60950 Unmethyla
Aav47683 Unmethyla
Aaz41946 IL-12 sec
Aaz41949 IL-12 sec
Aaz78802 HPV fusio
Aaz1943 CpG adjuv
Aav1423 CpG-N mot
Aav1424 CpG-N mot
Aav74242 CpG-N mot
Aav8635 Cytosine-
Aax8035 Cytosine-
Aaz8191 Chlamydia
Aaz61012 Nucleotid
Aaz61012 Nucleotid
Aaz48025 Immune re
Aaz48025 Immune re
Aaz47887 Immunosti
Aaz47887 Immunosti
Aaz47887 Immunosti
                                                                     4, 2006, 01:23:12 ; Search time 150.46 Seconds (without alignments) 885.910 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Description
          5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                               9993994
                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                        4996997 seqs, 3332346308 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUMMARIES
        GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                  Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                  nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ41946
AAZ41949
AAZ41949
AAX731943
AAX731943
AAX74244
AAX74242
AAX86336
AAZ861010
AAZ61010
AAZ61022
AAZ48022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ47885
AAZ47887
                                                                                                                                     1 tccatgacgttcctgacgtt 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV60950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA90447
                                                                                                                                                        IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                           geneseqn20008:*
geneseqn2001as:*
geneseqn2001bs:*
geneseqn2002bs:*
geneseqn2002bs:*
geneseqn2003as:*
                                                                                                                                                                                                                                                                                                                                                                                                                     geneseqn2003cs:*
geneseqn2003ds:*
                                                                                                                                                                                                                                                                                                                                                                                                                                             geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                geneseqn2005s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                        genesegn2004bs
                                                                                                                                                                                                                                                                                                                        geneseqn1980s:*
                                                                                                                                                                                                                                                                                                                                    geneseqn1990s:*
                                                                                                                                                                                                                                   seq length: 0
seq length: 200000000
                                                                                                              US-10-789-758A-1
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
```

10:

Post-processing:

Database

Minimum DB Maximum DB

Maximum

Length

Query

Score

Result

1000.00

Pred. No. 4.7;

용

```
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loc
Matches
                                                                                                                         AAV27667
                                                                                                                                                  ઠે
                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       used in the method of the invention. The method is for treating a subject having, or at risk of having an acute decrement in air flow, comprising administering a nucleic acid sequence containing at least one administering a nucleic acid sequence containing an unmethylated CpG dinucleotide affect an immune response in a subject by activating natural killer cells (NK) or redirecting a subject by activating natural to a Thi response by inducing monocytic and other cells to produce Thi cytokines. They can be used to treat pulmonary disorders having an dimunologic component, such as asthma or environmentally induced airway disease. They can also be used to treat diseases associated with Grampositive bacterial infections or endotoxaemia including bacterial.
                                                                                                            ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          meningitis, neonatal sepsis, cystic fibrosis, inflammatory bowel disease and liver cirrhosis, Gram-negative pneumonia, Gram-negative abdominal
                                                                                                                                                                                                                                                                                                                                         Unmethylated CpG dinucleotide; immune response; bacterial meningitis; natural killer cell activation; NK cell; Th2 response; neonatal sepsis; pulmonary disorder; asthma; environmentally induced airway disease; bacterial infection; endotoxamia; therapy; cystic fibrosis; inflammatory bowel disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        abscess, haemorrhagic shock, disseminated intravascular coagulation, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Use of nucleic acids containing an unmethylated CpG - for treating a subject having or at risk of having an acute decrement in air flow or inhibiting an inflammatory response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence represents an unmethylated CpG dinucleotide, and can be
                                                                                                              Gaps
    an adjuvant, specifically to induce an immune response against an antigenic protein, and are used particularly for virally mediated disorders, e.g. hepatitis B virus infection
                                                                                                            ö
                                                                                 Score 20; DB 2; Length 20;
Pred. No. 4.7;
                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                        Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   an inflammatory response to lipopolysaccharide
                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                     Unmethylated CpG dinucleotide 1826.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 35; Page 27; 65pp; English.
                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                 1 rccardacdriccidacdri 20
                                                                                   Query Match
100.0%;
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                      AAV47683 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-US003678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-0039405P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schwartz DA, Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1998-480941/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9837919-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-FEB-1997;
                                                                                                                                                                                                                                                                                           20-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   03-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                 AAV47683;
                                                                                                                                                                                                            RESULT 2
```

100.0%; Score 20; DB 2; Length 20;

Query Match

```
ANY27641-751 represent immunostimulatory oligodeoxyribonucleotides (ODNs)

C f the invention. The ODNs contain at least one unmethylated CpG

dinucleotide, and have the formula: 5' NIXIGGARN2 3', where at least one

ucleotide separates consecutive CpGs, X1 is adenine, guanine, or

thymine, X2 is cytosine or thymine, N is any nucleotide and N1+N2 is 0-26

C thymine, X2 is cytosine or thymine, N is any nucleotide and N1+N2 is 0-26

C or more than one CGG or CGG trimer OR 5' NXIX2CG3X4M3', where at least

C on more than one CGG or CGG trimer OR 5' NXIX2CG3X4M3', where at least

C one nucleotide separates consecutive CpGs, X1 and X2 are selected from

CGT, GpG, GpA, ApT and ApA, X3and X4 are selected from TpT or CpT, N is

any nucleotide and N1+N2 is 0-26 bases with the provision that N1 and N2

does not contain a CCGG tetramer or more than one CGG or CGG trimer. The

CODNs activate lymphocytes in a subject and redirect a subject's immune

C response from a Th2 to a Th1 (e.g. by inducing monocytic cells and other

CC cells to produce Th1 cytokines, including monocytic cells and GM-CSF).

CT the ODNs can be used to treat or prevent an asthmatic disorder,

autoimmune diseases, in desensitisation therapy, as an artificial

CC humber of a disperse or an ammmal such as a mouse or a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New immunostimulatory nucleic acid molecules - which contain at least one unmethylated CpG dinuclectide, used for treating e.g. tumours, infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Immunostimulatory; oligodeoxyribonuclectide; ODN; unmethylated CpG dinuclectide; activate; lymphocyte; immune response; Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease; desensitisation therapy; artificial adjuvant; antibody generation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunostimulatory oligodeoxyribonucleotide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 2; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 20; DB 2
100.0%; Pred. No. 4.7;
iive 0; Mismatches
                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 35; Page 84; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; FIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 rccargacGrrccrGacGrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rccardacerrccrdacerr 20
                                                                                                                   50
100.0%; PAR
                                                                                                                                                                               rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                             AAV27667 standard; DNA; 20 BP
                                                                                                                   1 TCCATGACGTTCCTGACGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97WO-US019791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96US-00738652.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-OCT-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                    20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        autoimmune disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IOWA ) UNIV IOWA RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Krieg AM, Kline JN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-272127/24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
Les 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9818810-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-MAY-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                         AAV27667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

AAZ41949 standard; DNA; 20 BP.

RESULT 5 AAZ41949

```
thuman Paker. The Investion comparises Stimulating an immune response in a subject comprising administering to a subject exposed to an antigen, an immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide considers and a subject exposed to an antigen, an immunostimulating an antigen specific immune response. The methods are useful for treating cancer by stimulating an antigen specific immune response. The methods are including but not limited to: sarcoma, carcinoma, fibroma, inhumans, including but not limited to: sarcoma, carcinoma, fibroma, inhumans, including but not limited to: sarcoma, carcinoma, fibroma, inhumans, including but not limited to: sarcoma, carcinoma, fibroma, inhumbans, including but not limited to: sarcoma, carcinoma, fibroma, inhumbans, including but not limited to: sarcoma, carcinoma, fibroma, inhumbans, including but not limited to: sarcoma, carcinoma. The methods are also useful for treating infectious diseases. The methods may also be used to treat allorgic diseases, e.g. asthma. The methods and compositions may also be applied to treat cancer and tumours of non human subjects, e.g. cate and dogs. Neoplasias affecting agricultural livestock may also be treated by the bacterium contagious diseases of sheep and goats caused by the bacterium contagious diseases of sheep and goats caused by the bacterium contagious diseases of sheep and goats caused by the bacterium contagious diseases of sheep and goats caused by the bacterium contagious diseases of sheep and goats caused by the bacterium contagious diseases of sheep and goats caused she an adjuvant in cubeful in activating B cells, M cells, and antigen presenting cells, conjunction with tumour antigens to protect against a tumour challenge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequences AAZ41856-241949 are phosphorothioate CpG oligonucleotides which are used in the invention to induce interleukin-12 (IL-12) secretion from human PBMC. The invention comprises stimulating an immune response in a
                                                                                                                                                                                                                                    CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel synergistic combinations of immunostimulatory oligonucleotides and immunopotentiating cytokines are useful for stimulating the immune
                                                                                                                                                                                                                                                           human PBMC; immune response; cancer; HIV; bacterial disease; asthma; neoplastic disorder; jaagsiekte; B cell; NK cell; 88; cytokine; antigen presenting cell; infection; allergic disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                         IL-12 secretion inducing CpG oligonucleotide 91.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 8; Page 88; 91pp; English.
                                           AAZ41946 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-US007335.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0080729P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IOWA ) UNIV IOWA RES FOUND
                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Weiner G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-620169/53.
                                                                                                                                                                                                                                                                                                                                                                                                                 WO9951259-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-APR-1998;
                                                                                                                                           24-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-OCT-1999.
                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                             AAZ41946;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Krieg AM,
RESULT 4
                      AAZ41946
```

```
Sequences AAZ41856-Z41949 are phosphorothioate CpG oligonuclectides which are used in the invention congrises stimulating an immune response in a subject comprising administering to a subject exposed to an antigen, an subject comprising administering to a subject exposed to an antigen, an immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide con immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide con immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide con specific antigen specific immune response against a cancer antigen. The methods can also be used to treat neoplastic disorders in humans, including but not limited to: sarcoma, carcinoma, fibroma, Lymphoma, melanoma, neuroblastoma, retinoblastoma, and glioma. The methods are also useful for treating infectious diseases, and glioma and also be used to treat allergic diseases, e.g. asthma. The methods and compositions may also be applied to treat cancer and tumours in non human subjects, e.g. cats and dogs. Neoplasias affecting themselved and compositions may also be treated and include leukaemia, heamangiopericytoma and bovine ocular neoplasia. Chronic, infectious, contagious diseases of sheep and goats caused by the bacterium contagious diseases of sheep and goats caused by the bacterium correct of the means, also he treated and contagious under contagious diseases of sheep and goats caused by the bacterium correct of the contagious diseases of sheep and contagious diseases of sheep and contagious diseases.
                                                                                                                                                                CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel synergistic combinations of immunostimulatory oligonucleotides and immunopotentiating cytokines are useful for stimulating the immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  caused by jaagslekte may also be treated. Op oligonucleotides can be useful in activating B cells, NK cells, and antigen presenting cells, such as monocytes and macrophages. Op oligonucleotides enhance antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dependent cellular cytotoxicity and can be used as an adjuvant in
conjunction with tumour antigens to protect against a tumour challenge
                                                                                                                                                                                    human PBMC, immune response, cancer; HIV; bacterial disease; asthma; neoplastic disorder; jaagsiekte; B cell; NK cell; 85; cytokine; antigen presenting cell; infection; allergic disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 20; DB 2; Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                              IL-12 secretion inducing CpG oligonucleotide 94.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 8; Page 89; 91pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US007335.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0080729P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IOWA ) UNIV IOWA RES FOUND.
                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Krieg AM, Weiner G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-620169/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                02-APR-1999;
                                                                 24-JAN-2000
                                                                                                                                                                                                                                                                                                                                   WO9951259-A2
                                                                                                                                                                                                                                                                                                                                                                                   14-OCT-1999.
                                                                                                                                                                                                                                                                                      Synthetic.
                    AAZ41949;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                system.
```

ö

Gaps

ö

0; Indels

0; Mismatches

20 20

1 TCCATGACGTTCCTGACGTT rccargacgrrccrgacgrr

à 셤

Conservative

20;

Matches

ö

Gaps

ö

0; Indels

0; Mismatches

1 TCCATGACGTTCCTGACGTT 20

ઠ

TCCATGACGTTCCTGACGTT

20

RESULT 6

```
This sequence represents a CpG adjuvant that can be used in the vaccine composition of the invention. The vaccine comprises a polyoxyethylene ether or ester (I), not in the form of a vesicle, pharmaceutically acceptable excipient and an antigen (Ag) or antigenic composition. The vaccine can be used to treat or prevent infections (by bacteria, viruses or other parasites), allergy and cancer. (I), which are safe, easy to testilize and simple to administer, are powerful vaccine adjuvants, able to induce a systemic immune response when administered (non-invasivally) to the mucosa. The response is at least as good as that from conventional systemic injection. (I) are effective at low concentration, have low
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN; viral antigen; bacterial antigen; parasite; therapeutic; growth factor; toxin; tumour suppressor; cytokine; apoptotic protein; interferon; hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 4.7; 2ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                Vaccine to protect against infections, allergy and cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST.
(IOWA ) UNIV IOWA RES FOUND.
(QIAG-) QIAGEN GMBH.
                                                                                                                                                               (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  reactogenicity and are well tolerated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGACGITCCTGACGIT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                     Claim 16; Page 32; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-0047209P
97US-0047233P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-US010408
                                                                      99WO-EP002278
                                                                                                            98GB-00007805
                                                                                                                              98GB-00020956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAV74237 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CpG-N motif S-ODN 1826 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (revised)
                                                                                                                                                                                                       Friede M, Hermand P;
                                                                                                                                                                                                                                          WPI; 1999-620290/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9852581-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-MAY-1997;
20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-MAR-2003
15-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-NOV-1998
W09952549-A1
                                                                        29-MAR-1999;
                                                                                                            09-APR-1998;
                                                                                                                                25-SEP-1998;
                                 21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV74237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAV74237
ID AAV7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX78791-X78801 represent nucleic acid sequences which encode novel constructs comprising an E6 or E7 protein or E6/E7 fusion protein from HPW (represented in AAX72515-Y25386). These constructs are optionally linked to an immunological fusion partner and an immunomodulatory CpG oligonucleotide. The products of the invention can be used to induce an immune response in a partient to an HPV antigen. They can also be used for preventing or treating HPV induced tumours. This sequence represents a CpG oligonucleotide which is used in the method of the invention
                                                                                                                                                                                                                          Fusion protein; B6 protein; E7 protein; B6/E7; immunomodulator; tumour; immunological fusion partner; CpG oligonucleotide; immune response; HPV antigen; prevention; treatment; primer; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CpG adjuvant; vaccine; polyoxyethylene ether; polyoxyethylene ester; antigen; infection; allergy; cancer; therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Composition comprising an E6, E7 or E6/E7 fusion protein from HPV to induce immune response to HPV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 20; DB 2; Length 20; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Migmatches
                                                                                                                                                                                           HPV fusion protein CpG oligonucleotide 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Page 36; 62pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 rccargacGriccrgacGrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
ilarity 100.0%;
Conservative 0
                                                                            AAX78802 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-EP008563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97GB-00027262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ31943 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerard CMG;
                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CpG adjuvant oligo 1001.
                                                                                                                                                                                                                                                                                                                           Human papillomavirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-405485/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
es 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dalemans WLJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                           18-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                  WO9933868-A2
                                                                                                                                                         06-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                        08-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ31943;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                    AAX78802;
```

Best Loc Matches

ઠ ద RESULT 7

ö

Gaps ö

```
AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a method for enhancing the immunostimulatory effect of an antigen encoded by nucleic acid contained in a nucleic acid construct. The method involves determining the CpG-N and CpG-S motifs present in the construct,
                                                             AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a method for enhancing the immunostimulatory effect of an antigen encoded by nucleic acid contained in a nucleic acid construct. The method involves determining the CpG-N and CpG-S motifs present in the construct, removing neutralising CpG (CpG-N) motifs and optionally inserting stimulatory CpG (CpG-S) motifs in the construct, thereby producing a nucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a parasite. They can also be used for expression of a therapeutic polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines, apopytotic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN; viral antigen; bacterial antigen; parasite; therapeutic; growth factor; toxin; tumour suppressor; cytokine; apoptotic protein; interferon; hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for enhancing the immunostimulatory effect of an antigen or enhancing the
                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Score 20; DB 2; Length 20; 100.0%; Pred. No. 4.7; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              enhancing the immunostimulatory effect or
expression of a therapeutic polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wu T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 64; 109pp; English.
                       Example 1; Page 64; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGITCCTGACGIT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schorr J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98WO-US010408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97US-0047209P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-0047233P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV74242 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CpG-N motif O-ODN 2061 DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Davis HL, Krieg AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (QIAG-) QIAGEN GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-059712/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9852581-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-MAR-2003
15-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-NOV-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV74242;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IOWA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV74242
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                 AAV74237-V74253 are oligodeoxynucleotide (ODN) primers used to describe a method for enhancing the immunostimulatory effect of an antigen encoded by nucleic acid construct. The method involves determined in a nucleic acid construct. The method involves determining the CpG-N and CpG-S motifs present in the construct, removing neutralising CpG (CpG-N) motifs and optionally inserting stimulatory CpG (CpG-S) motifs in the construct, thereby producing a nucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a parasite. They can also be used for expression of a therapeutic polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines, apoptocic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CpG-N motif; immunostimulation; antigen; CpG-S motif; immunisation; ODN; viral antigen; bacterial antigen; parasite; herapeutic; growth factor; toxin; tumour suppressor; cytokine; apoptotic protein; interferon; hormone; clotting factor; ligand; receptor; oligodeoxynucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for enhancing the immunostimulatory effect of an antigen or enhancing the
                                                                                         Use of neutralising CpG and stimulating CpG motifs in DNA vectors - for enhancing the immunostimulatory effect of an antigen or enhancing the expression of a therapeutic polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 100.0%; Pred. No. 4.7;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (OTTA-) OTTAWA CIVIC HOSPITAL LOEB RES INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    enhancing the immunostimulatory effect o expression of a therapeutic polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W I;
Wu T;
                                                                                                                                                                                           Example 1; Page 64; 109pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 rccargacgrrccrgacgrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schorr J,
Schorr J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV74244 standard; DNA; 20 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CpG-N motif SOS-ODN 1980 DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-0047209P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-US010408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Davis HL, Krieg AM,
Krieg AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (IOWA ) UNIV IOWA RE
(QIAG-) QIAGEN GMBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-059712/05
                                              WPI; 1999-059712/05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9852581-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-2003
15-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-NOV-1998
  Davis HL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV74244;
```

RESULT 9

셤 ð

ô

Gaps

1 rccardacGrrccrdacGrr 20

셤

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes a formulation (A) comprising a cytosine-guanosine dinucleotide motif (CpG) oligonucleotide and T-independent type 1 or type 2 antigens or polysaccharide conjugate antigen. The present sequence represent a specifically claimed CpG oligonucleotide. A vaccine composition comprising the formulation is used for inducing a immune response to T-independent type 1 or type 2 antigen or polysaccharide conjugate antigen. The use of immunostimulatory CpG oligonucleotide acts
removing neutralising CpG (CpG-N) motifs and optionally inserting atimulatory CpG (CpG-S) motifs in the construct, thereby producing a nucleic acid construct having enhanced immunostimulatory efficacy. The method can be used for immunisation against viral antigens, e.g. from hepatitis B virus (HBV), bacterial antigens or an antigen derived from a parasite. They can also be used for expression of a therapeutic polypeptide, e.g. growth factors, toxins, tumour suppressors, cytokines, apoptotic proteins, interferons, hormones, clotting factors, ligands and receptors. (Updated on 20-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A vaccine composition for inducing a immune response to T-independent type 1 or type 2 antigen or polysaccharide conjugate antigen.
                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                              .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cytosine-guanosine dinucleotide motif; CpG; immunomodulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               unmethylated, vaccine, immunostimulation, immune response, T-independent type 1 antigen; T-independent type 2 antigen; polysaccharide conjugate antigen; ss.
                                                                                                                                                                                                                                   Score 20; DB 2; Length 20; Pred. No. 4.7;
                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cytosine-guanosine dinucleotide motif oligonucleotide #3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                 Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               as an adjuvant to pneumococcal polysaccharides
                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prieels J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                       TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 6; Page 31; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Laferriere CAJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX88536 standard; DNA; 20 BP
                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98WO-EP008562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97GB-00027262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-405369/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dalemans WLJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9933488-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX88536;
                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           88888888888888
                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                     셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence represents DNA encoding Chlamydia trachomatis 60 kD outer membrane protein (OMP) gene-derived CpG oligonuclectide 4. This oligonuclectide contains a CpG motif. It was tested for its ability to act as an adjuvant for the MTA-alpha peptide (AAX42723), which can induce inflammatory cardiomyopathy (ICM) in mice. It was found to act as a potent immunostimulator, whereas a oligonuclectide from the same source which did not contain a CpG motif (AAZ28193) was hardly effective as an adjuvant. Inflammatory cardiomyopathy peptides (AAX42723, AAX42725-1842731) can be used with such an adjuvant and an excipient in a vaccine for decreasing ICM
                                                                               Chlamydia trachomatis outer membrane protein gene-derived CpG oligo 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                         Heart disease; inflammatory; autoimmune; cardiomyopathy; adjuvant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptides that induce or suppress inflammatory cardiomyopathy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ch 100.0%; Score 20; DB 2; Length 20; Smilarity 100.0%; Pred. No. 4.7; 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                        /*tag= a
/mod_base= OTHER
/note= "OTHER = phosphorothioate linkage"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                          ż
                                                                                                                                                                                                                                                                                                                                                                                                                          Nen
                                                                                                                                                                                                                                                                                                                                                                                                                          Penninger JM,
                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 2; Col 25; 17pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rccargacgrrccrgacgrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rccargacgrrccrgacgrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20 BP
BP
                                                                                                                                                                                                                                                                                                                                      98US-00133774.
                                                                                                                                                                                                                                                                                                                                                                  98US-00133774
AAZ28191 standard; DNA; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAY-2000 (first entry)
                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                          Hessel AJ,
                                                                                                                                                                                                                                                                                                                                                                                              (AMGE-) AMGEN CANADA INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ61012 standard; DNA;
                                                                                                                                                                                                             ...20
*tag=
                                                                                                                         CpG motif; vaccine; ds
                                                                                                                                                                  Chlamydia trachomatis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1999-589735/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                              Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                          Bachmaier K,
                                                      20-DEC-1999
                                                                                                                                                                                                                                                                                                                                      12-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                  12-AUG-1998;
                                                                                                                                                                                                                                                                              US5962636-A.
                                                                                                                                                                                                                                                                                                          05-0CT-1999
                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ61012;
                           AAZ28191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ6101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XXXE
                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
```

ઠે

Query Match
Best Local Similarity 100.0%; Pred. No. 4.7;
Matches 20; Conservative 0; Mismatches 0; Indels

Gaps

```
AAZ60931-Z61015 represent immunostimulatory stereoisomers of CpG
oligonucleotides. The sequences are derived from generic nucleic acid
sequence, from which immunoihibitory sequences may also be derived. The
immunostimulatory nucleic acids can be co-administered with an antigen to
cuduce an antigen-specific immune response. The immunostimulatory nucleic
acids can also be used in methods for redirecting a subject's immune
cc capponse from a Th2 to a Th1, for treating asthma, for desensitising a
cc subject against the occurrence of an allergic reaction in response to
cc nucleat with an allergen, for activating an immune cell, especially a
lymphocyte or a dendritic cell expressing a cancer antigen or for
treating cancer. The immunoihibitory nucleic acid can be used to prevent
cc in immune response, especially where the immune response in the subject
is excessive due to having received an immune stimulating compound. The
immunoihibitory nucleic acid can be used to treat a subject having or at
inflammatory disease, especially inflammatory bowel disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haematopoiesis; regulation, CpG oligonucleotide; phosphorothioate; immune remodeling; thrombopoiesis; anaemia; immune system; cancer; immune response; allergic reaction; infectious disease; asthma; thrombocytopaenia; immunchaemolytic disorder; panetic disorder; haemoglobinopathy; kidney failure; chronic inflammatory disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immune remodeling inducing CpG oligonucleotide SEQ ID NO:105.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Immunostimulatory and immunoinhibitory stereoisomers of CpG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     autoimmune disease, gingivitis, psoriasis and sepsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                               oligonucleotides useful for immunotherapy of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                  (IOWA ) UNIV IOWA RES FOUND.
(CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure, Page 12; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ48025 standard; DNA; 20 BP
                                                                                                                                                    99WO-US017100.
                                                                                                                                                                                                       98US-0094370P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-MAR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rheumatoid arthritis; ss
                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-195254/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                   WO200006588-A1.
                                                                                                                                                                                                       27-JUL-1998;
                                                                                                                                                    27-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9958118-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-NOV-1999.
                                                                                                   10-FEB-2000
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                      Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ48025;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
AAZ48025
  ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Signature of the sequences are derived from generic nucleic acid sequence, from which immunoinhibitory sequences may also be derived. The sequences read an interest nucleic acids can be co-administered with an anticen to acids can anticent of the immunostimulatory nucleic acids can anticent of the immunostimulatory nucleic acids can also be used in methods for redirecting a subject's immune response from a Th2 to a Th1, for treating asthma, for desensitising a subject against the occurrence of an allergic reaction in response to contact with an allergen, for activating an immune call, especially a lymphocyte or a dendritic call expressing a cancer antigen or for treating cancer. The immunoinhibitory nucleic acid can be used to prevent an immune response, especially where the immune response in the subject is excessive due to having received an immune stimulating compound. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunoinhibitory nucleic acid can be used to treat a subject having or at risk of an inflammatory disease, especially inflammatory bowel disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunostimulatory, stereoisomer; CpG oligonucleotide; Th2; Th1; asthma; allergic reaction; allergen; cancer antigen; cancer; immunoinhibitory; inflammatory disease; inflammatory bowel disease; autoimmune disease; gingivitis; psoriasis; sepsis; ss.
                                                                        [mmunostimulatory; stereoisomer; CpG oligonucleotide; Th2; Th1; asthma;
                                                                                                 allergic reaction, allergen; cancer antigen; cancer; immunoinhibitory; inflammatory disease; inflammatory bowel disease; autoimmune disease; gingivitis; psoriasis; sepsis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                        Nucleotide sequence of an immunostimulatory CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleotide sequence of an immunostimulatory CpG oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAZ60933-Z61015 represent immunostimulatory stereoisomers of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunostimulatory and immunoinhibitory stereoisomers of CpG oligonucleotides useful for immunotherapy of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 4.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         autoimmune disease, gingivitis, psoriasis and sepsis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 12; 88pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ61010 standard; DNA; 20 BP.
                                                                                                                                                                                                                                                                                                                                                           99WO-US017100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 100.0%;
nes 20; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                            98US-0094370P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 risk of an inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                            IOWA RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-195254/17.
                                                                                                                                                                                                                                                     WO200006588-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          IOWA ) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                            27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                      27-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAY-2000
                                                                                                                                                                                                                                                                                                        10-FEB-2000
```

AAZ61010;

AAZ61010

Query Match

Best Loc Matches

ઠે 셤

Krieg AM;

ö

Gaps

ö

0; Indels

```
against an antigen such as cells, cell extracts, proteins, carbohydrate, viral extracts, viruses, lipids, glycolipids, carbohydrate, viral extracts, viruses, bacteria, fungi, parasites and carbohydrate, viral extracts, viruses, bacteria, fungi, parasites and allergens. It can also be used for treating an infectious disease, allergic diseases and asthma, as well as thrombocytopaenia which is drug-induced, due to an autoimmune disorder such as idiopathic thrombocytopaenic purpura, or resulting from accidental or therapeutic radiation exposure. It can also be used for treating anaemia such as thrombocytopaenia which is adjaction exposure. It can also be used for treating anaemia such as haemoglobinopathy and inherited haemolytic disorder, genetic disorders such as haemoglobinopathy and inherited haemolytic anaemia, inadequate production despite adequate iron stores, chronic disease such as kidney failure, and chronic inflammatory disorder such as rheumatoid arthritis, or anaemia cresulting from accidental or therapeutic radiation exposure. AAZ48029 represent phosphorothicate CpG oligonucleotides used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes a method using CpG containing oligonucleotides (ONs) for regulating immune system remodeling and for regulating haematopoleasis. The method for inducing an antigen-specific immune response comprises: (1) administering an ON having a sequence including at least the formula (1); and (2) exposing the subject to an antigen sequence for an antigen-specific immune response: 5' XICGX2 3' (1), where the ON = includes at least 8 nucleotides; C and G = unmethylated, and X1 and X2 = nucleotides. The method can be used for inducing an immune response
                                                                                                                                                                                                                                                                                                    CpG containing oligonucleotides for, e.g. inducing an antigen-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Seguence 20 BP; 3 A; 6 C; 4 G; 7 T; 0 U; 0 Other;
                                                                                                                         (CPGI-) CPG IMMUNOPHARMACEUTICALS GMBH. (CPGI-) CPG IMMUNOPHARMACEUTICALS INC.
                                                                                                                                                                                                                                                                                                                                                                            Example 1, Page 67; 116pp; English.
  99WO-IB001285
                                                 98US-0085516P
99US-00241653
                                                                                                                                                                                                                                                                                                                                immune response.
                                                                                                                                                                                                    Wagner H, Lipford G;
                                                                                                                                                                                                                                                   WPI; 2000-062261/05.
14-MAY-1999;
                                                 14-MAY-1998;
02-FEB-1999;
                                                                                                                                                                                                                                                                                                                              specific
                                                                                                                                                                                                                                                                                                      Use of
```

4, 2006, 02:44:24 TCCATGACGTTCCTGACGTT 20 Search completed: May Job time : 150.46 secs g

ö

Gaps ö

0; Indels

100.0%; Score 20; DB 3; Length 20;

4.7;

100.001

Best Local Similarity 100. Matches 20, Conservative

Query Match

0; Mismatches

1 TCCATGACGTTCCTGACGTT 20

ð

Aaz87997 BBTE-labe
Aaz47850 Immunosti
Aaa395103 CpG adjuu
Aaz99003 CpG adjuu
Aaz99003 CpG motif
Aaz9660 Human Bcl
Aaz47680 Parzssitic
Aaz60278 Immunosti
Aac60278 Immunosti
Aac60278 Immunosti
Aac60278 Immunosti
Aac60273 Acii-Bcl
Aac6023 Acii-Bcl
Aah50615 Ngdural k
Aaf60923 Acii-Bcl
Aah50615 Ngdural k
Aaf60923 Immunosti
Aaf98832 CpG immunosti
Aaf9883 Immunosti
Aaf98920 Cmclif
Aas9896 Immunosti
Aaf9896 CpG-conta

Scoring table:

Searched:

08 08

Minimum | Maximum |

Database

Perfect score:

Sequence:

OM nucleic

Run on:

```
Anti-code oligomers which bind to bcl-2 mRNA - for the treatment of human
                                                                                                                                                                                                                                                                                                                                Anticode oligomer; antisense oligonucleotide; bcl-2; cancer; therapy;
                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
1. .18
// .18
// note= "3'-5' (antisense) sequence"
                                                                                                                                                                                                                      ALIGNMENTS
                     AAA90450
AAZ99603
AAA39264
AAA39264
AAA47680
AAA91620
AAA60278
AAA6037
AAA6037
AAA6093
AAA6093
AAA6093
AAA69950
                                                                                                                                                      AAF98929
AAF98966
AAF98885
AAA92362
AAA92362
                                                                                                                                                                                              AAF27748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 solid tumours, esp. breast cancer.
                                                                                                                                                                                                                                                                                                                Bcl-2 antisense oligonucleotide.
                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                            94WO-US010725
                                                                                                                                                                                                                                                                                                                                                                                                                                                           93US-00124256
                                                                                                                                                                                                                                                          AAQ86659 standard; DNA; 18
                                                                                                                                                                                                                                                                                          (revised)
(first entry)
chemoresistance; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1995-139394/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ပ
00000000000000000
                                                   .00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (REED/) REED J
                                                                         88
                                                                                                  90
                                                                                                        88
                                                                                                                                                100.
                                                                                          001
                                                                                                                         001
                                                                                                                                 007
                                                                                                                                                                                                                                                                                                                                                                      Key
misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                            20-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                             WO9508350-A1
                                                                                                                                                                                                                                                                                         25-MAR-2003
27-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAR-1995.
                                                                                                                                                                                                                                                                                                                                                        Synthetic.
AAQ86659;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Reed JC;
                                                                                                                                                                                                                                             RESULT 1
                                                                                                                                                                                                                                                     AAQ86659
CCXSXLLXSXXXXXXXXXXXLLLLXXXXXXXXXXXCCCCX
                                                                                                                                                                                                                                                                                                                                                                                                                          Aag86659 Bcl-2 ant
Aav55545 Unmethyla
Aav28181 Antisense
Aav219667 Human bcl
Aaz41948 IL-12 sec
Aaz41949 IL-12 sec
Aaz41905 IL-12 sec
Aaz31944 Chg adjuv
Aax27843 Antisense
Aax2784 Synthetic
Aax31944 CpG adjuv
Aax2754 Synthetic
Aax31844 Bcl2-targ
Aax33514 Bcl2-targ
Aax33514 Bcl2-targ
Aax33514 Bcl2-targ
Aax33514 Bcl2-targ
Aax34024 Immune re
Aaz4024 Immune re
Aaz47081 Immune re
                                                 4, 2006, 01:23:12; Search time 135.414 Seconds (without alignments) 885.910 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                              Description
       5.1.7
Biocceleration Ltd.
                                                                                                                                                        9993994
                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                       4996997 segs, 3332346308 residues
       GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                    nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AZ41948
AAZ41905
AAX78803
AAX98434
AAX99434
AAX27536
AAX18702
AAX88537
AAX88537
AAX33514
AAX33513
AAZ60975
                                                                                                                                                                                                                                                                                                                                                                                                                             AAQ86659
                                                                                                                 IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                  tctcccagcgtgcgccat 18
                                                                                                                                                                                                                                                                         genesequ2002as: *
genesequ2002as: *
genesequ2003as: *
genesequ2003as: *
genesequ2003cs: *
genesequ2003cs: *
genesequ2004as: *
                                                                                                                                                                                                                                           geneseqn1990s:*
geneseqn2000s:*
geneseqn2001as:*
geneseqn2001bs:*
                                                                                                                                                                                                                                                                                                                                         geneseqn2005s:*
                                                                                                                                                                                                                                                                                                                                                                                                             ü
                                                                                                                                                                                                                             N_Geneseq_21:*
: geneseqn1980s:*
                                                                                                                                                                       seq length: 0
seq length: 200000000
                                                                              US-10-789-758A-2
18
                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                    Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                            1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
1000.00
                                                    May
                                                                                                                                                                                                                                                                                                        13::::
```

Reversal of chemoresistance of tumor cells by antisense-mediated reduction of bcl1-2 expression was demonstrated using the oligonucleotide

Example 18; Page 44; 108pp; English

AAZ48024 AAZ47981 AAA14470

U

Score

Result

Gaps

ö

Indels

ö

Mismatches

```
18; Conservative
                                                                                                                                                                                                                                                                                                                            25-JUN-1998
                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAV27719;
                                                                                                                                                  AAV28181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                    Chen D,
  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
                                                                                               RESULT 3
                                                                                                            AAV2818:
                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                             ò
                                                  셤
                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This sequence represents an unmethylated CpG dinucleotide, and can be used in the method of the invention. The method is for treating a subject having, or at risk of having an acute decrement in air flow, comprising administering a nucleic acid sequence containing at least one unmethylated CpG. The nucleic acids containing an unmethylated CpG dinucleotide affect an immune response in a subject by activating natural killer cells (NK) or redirecting anocytic and other cells to produce Thi cytokines. They can be used to treat pulmonary disorders having an immunologic component, such as asthma or environmentally induced airway disease. They can also be used to treat diseases associated with Grampositive bacterial infections or endotoxaemia including bacterial.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disease
                                                                                                                                                                                                                                                                                                                       Unmethylated CpG dinucleotide; immune response; bacterial meningitis; natural killer cell activation; NK cell; Th2 response; neonatal sepsis; pulmonary disorder; asthma; environmentally induced airway disease; bacterial infection; endocoxaemia; therapy; cystic fibrosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neningitis, neonatal sepsis, cystic fibrosis, inflammatory bowel disease
and liver cirrhosis, Gram-negative pneumonia, Gram-negative abdominal
abscess, haemorrhagic shock, disseminated intravascular coagulation, or
given in AAQ86659. This is antisense to the first 6 codons of the bcl-2 ORF. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Use of nucleic acids containing an unmethylated CpG - for treating a subject having or at risk of having an acute decrement in air flow or
                                                                                               Gaps
                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 18; DB 2; Length 18; Pred. No. 23;
                                                                   Score 18; DB 2; Length 18; Pred. No. 23;
                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                          Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            an inflammatory response to lipopolysaccharide
                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          subject having or at rish or maring inhibiting an inflammatory response.
                                                                                                                                                                                                                                                                                                 Unmethylated CpG dinucleotide 1758.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 4; Page 35; 65pp; English.
                                                                                                                       18
                                                                                                                                             1 TCTCCCAGCGTGCGCAT 18
                                                                                                                                                                                                                                                                                                                                                                                 inflammatory bowel disease; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                  AAV52545 standard; DNA; 18 BP.
                                                                  Query Match
Best Local Similarity 100.0%;
Matches 18; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-US003678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0039405P
                                                                                                                      1 TCTCCCAGCGTGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (IOWA ) UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Krieg AM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-480941/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Schwartz DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-FEB-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9837919-A1
                                                                                                                                                                                                                                                                         20-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                              AAV52545;
                                                                                                                                                                                          RESULT 2
                                                                                                                                                                                                        AAV52545
                                                                                                                                                                                                                                              ប្តប្តវត្ត
ខ្លួន
                                                                                                                                                셤
                                                                                                                          ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV28155-268 represent oligonucleotides which can be purified using the method of the invention. The specification describes a matrix that comprises a support and naffility unit that specifically and reversibly binds a target oligonucleotide, and comprises a sequence of bases having the reverse complement of a hybridising portion of the target oligonucleotide. The matrix is used for affinity purification of synthetic oligonucleotide, specifically antisense agents, for treatment of hyperproliferative diseases, for treating a non-pathogen, non-fryperproliferative diseases, e.g. Alzheimer's, for modulating expression of cell surface proteins, and to inhibit a eukaryotic pathogen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matrix for selective separation of oligo:nucleotide - useful for, large scale purification of anti-sense agents from their deletion derivatives formed during synthesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 23; 0; Indels ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                               Purification; oligonucleotide; matrix; affinity unit; affinity purification; antisense; bcl-2; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                             Antisense oligonucleotide to bcl-2 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 86; 183pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cole DL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18
  18
                                                 1 rereceases recent 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-00769951.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-US023284.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rereceasesisesecar
1 TCTCCCAGCGTGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV27719 standard; DNA; 18
                                                                                                                                                                                      AAV28181 standard; DNA; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Srivatsa GS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-362922/31.
                                                                                                                                                                                                                                                                                            08-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9827425-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV27719
ID AAV2
XX
AC AAV2
XX
DT 01-C
```

m

```
CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion; human PBMC; immune response; cancer; HIV; bacterial disease; asthma; neoplastic disorder; jaagsiekte; B cell; NK cell; ss; cytokine; antigen presenting cell; infection; allergic disease.
                                                                                                                                                                                                                                                                                                                                                                                                Anti-sense oligo:nucleotide(s) complementary to BCL-2 mRNA - useful for treating cancers, e.g. lymphoma(s) and some leukaemia(s).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This antisense oligonucleotide is complementary to the translation initiation site of the human bcl-2 mRNA. The Bcl-2 antisense oligonucleotides are phosphorothioate derivatives and can straadle strategic sites such as the translation initiation site, donor and acceptor splicing sites, or sites for transportation or degradation. Blocking translation at such strategic sites prevents the formation of functional bcl-2 gene product. These oligonucleotides may be used for treating cancers associated with high levels of bcl-2 gene expression, especially lymphomas and some leukaemias. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IL-12 secretion inducing CpG oligonucleotide 93.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Col 23; 21pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 rereceácierecear 18
                                                                                                                                                                                                                       92US-00840716.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0080729P.
                                                                                                                                                      94US-00217082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US007335
                                                                                                                                                                                                88US-00288692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ41948 standard; DNA; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                (UYPE-) UNIV PENNSYLVANIA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 100.
Les 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Krieg AM, Weiner G;
                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-229881/20.
                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-APR-1999;
                                                                                                                                                    24-MAR-1994;
                                                                                                                                                                                                                         21-FEB-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W09951259-A2
                                                                                                                                                                                                22-DEC-1988;
                                                                   US5734033-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-OCT-1999.
                                                                                                            31-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ41948;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                          Reed J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ41948
    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV27641-751 represent immunostimulatory oligodeoxyribonuclectides (ODNs) of the invention. The ODNs contain at least one unmethylated CpG dinuclectide, and have the formula: 5' NIXICGX2N2 3', where at least one nuclectide separates consecutive CpGs, X1 is adenine, guanine, or thymine, X2 is cytosine or thymine, N is any nuclectide and N1+N2 is 0-26 bases with the provision that N1 and N2 does not contain a CCGG tetramer or more than one CCG or CGG trimer OR 5' NIXIZCGX3X4N 3', where at least one nuclectide separates consecutive CpGs, X1 and X2 are selected from GpT, GpG, GpA, ApT and ApA, X3and X4 are selected from TpT or CpT, N1 is any nuclectide and N1+N2 is 0-26 bases with the provision that N1 and N2 does not contain a CCGG tetramer or more than one CCG or CGG trimer. The ODNs activate lymphocytes in a subject and redirect a subject s immune response from a Th2 to a Th1 (e.g. by inducing monocytic cells and other cells to produce Th1 cytokines, including IL-12, IFN-gamma and GM-CSF). The ODNs can be used to treat or prevent an asthmatic discases, autoinmune diseases, in desensitiasation therapy, as an artificial adjuvant during antibody generation in a mammal such as a mouse or a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New immunostimulatory nucleic acid molecules - which contain at least one unmethylated CpG dinucleotide, used for treating e.g. tumours, infections or autoimmune disease.
                                       Immunostimulatory; oligodeoxyribonucleotide; ODN;
unmethylated CpG dinucleotide; activate; lymphocyte; immune response;
Th2; Th1; cytokine; treatment; prevention; asthma; autoimmune disease;
desensitisation therapy; artificial adjuvant; antibody generation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense oligonucleotide; bcl-2 gene; lymphoma; leukaemia; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
Immunostimulatory oligodeoxyribonucleotide of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Seguence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human bcl-2 antisense oligonucleotide 13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 49; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 rereceáciereceren 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВЪ.
                                                                                                                                                                                                                                                                                                                                 96US-00738652.
                                                                                                                                                                                                                                                                                       97WO-US019791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCTCCCAGCGTGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                           (IOWA ) UNIV IOWA RES FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAV19667 standard; DNA; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                       Krieg AM, Kline JN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1998-272127/24.
                                                                                                                                                                                                                                                                                     30-0CT-1997;
                                                                                                                                                                                                WO9818810-A1
                                                                                                                                                                                                                                                                                                                                 30-0CT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-2003
12-JUN-1998
                                                                                                                                                                                                                                           07-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancer; 88
                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV19667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
```

Matches

ò 셤 RESULT 5 AAV19667

ö

Gaps

.; 0

```
Sequences AAZ41856-Z41949 are phosphorothicate CpG oligonucleotides which are used in the invention comprises stimulating an immune response in a subject comprising administering to a subject exposed to an antigen, an immunopotentiating octokine and an immunostimulatory CpG oligonucleotide immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide continues a sponse against anacra antigen. The methods are useful for treating cancer by stimulating an antigen specific immune casponse. The methods are useful for treating cancer by stimulating an antigen specific immune casponse against an humans, including but not limited to: sarcoma, carcinoma, fibroma, inhumans, including but not limited to: sarcoma, carcinoma, fibroma, Lymphoma, melanoma, neuroblastoma, retinoblastoma, and glioma. The methods act also useful for treating infectious diseases.

Carcinoma, fibroma and bord as also useful for treating infectious diseases.

CT he methods may also be useful for treat cancer and tumours of mon human subjects, e.g. cats and dogs. Neoplasias affecting agricultural livestock may also be treated and include leukaemia, hammanglopericytoma and bovine ocular neoplasia. Chronic, infectious, conteaglous diseases of sheep and goats caused by the bacterium contead by laagaiekte may also be treated. CpG oligonucleotides can be conteaglous than activating B cells, NK cells, and antigen bresenting cells, such as monocytes and macrophages. CpG oligonucleotides enhance antibody dependent cellular cytotoxaticity and can be used as an adjuvant in cyclouncleotidy and conjunction with tumour antigens to protect against a tumour challenge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CpG oligonucleotide; phosphorothioate; interleukin-12; IL-12; secretion; human PBMC; immuna response; cancer; HIV; bacterial disease; asthma; neoplastic disorder; jaagslekte; B cell; NK cell; ss; cytokine; antigen presenting cell; infection; allergic disease.
                                                                Novel synargistic combinations of immunostimulatory oligonucleotides and immunopotentiating cytokines are useful for stimulating the immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
100.0%; Score 18; DB 2; Length 18;
Best Local Similarity 100.0%; Pred. No. 23;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IL-12 secretion inducing CpG oligonucleotide 50.
                                                                                                                                                          Example 8, Page 88, 91pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 rérécédécérécécér 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ41905 standard; DNA; 18 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US007335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0080729P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-JAN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Krieg AM, Weiner G;
                       WPI; 1999-620169/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9951259-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-0CT-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ41905;
                                                                                                                  eyetem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ41905
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

Gaps ö

```
contractions and properties at the second from the sequences are used in the invention to induce interleukin-12 (IL-12) secretion from human PBMC. The invention comprises stimulating an immune response in a subject comprising administering to a subject exposed to an antigen, an immunopotentiating cytokine and an immunostimulatory CpG oligonucleotide to induce a synergistic antigen specific immune response. The methods are altimulating an antigen specific immune response against a cancer antigen. The methods can also be used to treat neoplastic disorders in humans, including but not limited to: sarcoma, carcinoma, fibroma, Lymphoma, melanoma, neuroblastoma, retinoblastoma, and glioma. The methods are also useful for treating infectious diseases, e.g. viral diseases such as HIV, bacterial diseases, and fungal diseases, e.g. viral diseases such as HIV, bacterial diseases, e.g. asthma. The methods and compositions may also be used to treat cancer and tumours control in the stock may also be treated and include leukaemia, in non human subjects, e.g. cats and dogs. Neoplasias affecting agricultural livestock may also be treated and include leukaemia, contagious diseases of sheep and goats caused by the bacterium corruptions of sheep and goats caused by the bacterium pseudotuberculosis, and contagious lung tumour of sheep causeful in activating B cells, NK cells, and antigen presenting caused by langualed and antigen presenting caused by the monocytes and macrophages. CpG oligonucleotides enhance antibody contagious tellulum cytocoxicity and can be used as a manocytes and macrophages. CpG oligonucleotides enhance antibody contagious in the lunar cytocoxicity and can be used as an adjuvant in
                                                                                                                                                                                              Sequences AAZ41856-Z41949 are phosphorothioate CpG oligonucleotides which
                                                         Novel synergistic combinations of immunostimulatory oligonucleotides and immunopotentiating cytokines are useful for stimulating the immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fusion protein; E6 protein; E7 protein; E6/E7; immunomodulator; tumour; immunological fusion partner; CpG oligonucleotide; immune response; HPV antigen; prevention; treatment; primer; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            conjunction with tumour antigens to protect against a tumour challenge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HPV fusion protein CpG oligonucleotide 2.
                                                                                                                                                    Example 8; Page 80; 91pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 rereceasecersecent 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-EP008563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX78803 standard; DNA; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-SEP-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity luv..
Loca 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human papillomavirus.
                  WPI; 1999-620169/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W09933868-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAX78803;
                                                                                                        system.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX78803
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

(SMIK) SMITHKLINE BEECHAM BIOLOGICALS.

Dalemans WLJ, Gerard CMG;

97GB-00027262.

24-DEC-1997;

```
phosphorothicate or phosphodiester bonds. The oligonucleotide is lipidencappulated using the method of the invention. A composition comprising lipide-encapsulated particles of a therapeutic agent, e.g. antisense oligonucleotides, is prepared by mixing at least 2 lipids with buffered aqueous solution of charged therapeutic agent to form an intermediate mixture to lipid-encapsulated particles, and changing the pH of the mixture to neutralise at least some of the external surface charges on the particles. One lipid has a (de) protonatable group with Ka such that the lipid is charged at a first pH but neutral at a second pH (particularly near physiological pH) and the buffer maintains this lipid in the charged form (1.e. cationic when the therapeutic agent is anionic in the buffer, or vice versa). The second lipid prevents particles aggregation during formation of the lipid-therapeutic agent particles. The composition is used to introduce therapeutic agents into cells, in vivo, particularly to treat or prevent diseases associated with aberrant gene expression in mammals, specifically tumours,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents a CpG adjuvant that can be used in the vaccine composition of the invention. The vaccine comprises a polyoxyethylene elekter or ester (I), not in the form of a vesicle, pharmaceutically acceptable excipient and an antigen (Ag) or antigenic composition. The vaccine can be used to treat or prevent infections (by bacteria, viruses or other parasites), allergy and cancer. (I), which are safe, easy to sterilize and simple to administer, are powerful vaccine adjuvants, able to induce a systemic immune response when administered (non-invasively) to the mucosa. The response is at least as good as that from conventional systemic injection. (I) are effective at low concentration, have low
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CpG adjuvant, vaccine, polyoxyethylene ether, polyoxyethylene ester, antigen, infection, allergy, cancer; therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 23; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vaccine to protect against infections, allergy and cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 9; Page 26; 52pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rcrcccagcerececcar 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-EP002278.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98GB-00007805
98GB-00020956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ31944 standard; DNA; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
nes 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CpG adjuvant oligo 1002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٠<u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1999-620290/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Friede M, Hermand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9952549-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-OCT-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ31944;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ31944
          8566666666666666666888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                AAX78791-X78801 represent nucleic acid sequences which encode novel constructs comprising an E6 or E7 protein or E6/E7 fusion protein from HPV (represented in AAX25375-Y25386). These constructs are optionally linked to an immunological fusion partner and an immunomodulatory CpG oligonucleotide. The products of the invention can be used to induce an immune response in a patient to an HPV antigen. They can also be used for preventing or treating HPV induced tunnurs. This sequence represents a CpG oligonucleotide which is used in the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Composition containing lipid-encapsulated therapeutic agent - useful, e.g. for delivering antisense molecules or ribozymes or treating diseases associated with aberrant gene expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Antisense oligonucleotide; human bcl-2 gene; phosphorothioate; phosphodiester; lipid-encapsulation; tumour; aberrant gene expression; treatment; inflammation; infection; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence represents an antisense oligonucleotide directed against the human bcl-2 gene. The oligonucleotide can have either
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                             Composition comprising an E6, E7 or E6/E7 fusion protein from HPV to induce immune response to HPV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cullis P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 . 18
/*tag= a
/note= "phosphorothioate or phosphodiester bonds"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antisense oligonucleotide directed against human bcl-2 gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 100.0%; Score 18; DB 2; Length 18; Best Local Similarity 100.0%; Pred. No. 23; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ansell SM,
                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hope MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Harasym T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 23; 98pp; English.
                                                                                                                                                      Claim 11; Page 37; 62pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-00856374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-CA000485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAV99434 standard; DNA; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (INEX-) INEX PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Semple SC, Klimuk SK,
Scherrer P, Debeyer D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-045179/04.
                            WPI; 1999-405485/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
modified_base
```

Homo sapiens.

Synthetic

22-MAR-1999

AAV99434;

RESULT 9 AAV99434

ઠ g 14-MAY-1998; 14-MAY-1997;

WO9851278-A2

19-NOV-1998

ö

Gaps

; 0

Pred. No. 23;

SXS

유 õ

```
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                         ઠે
                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the their phosphonates (I), and silyloxymethyl halides (II). (I) are intermediates for synthesis of RNA-oligonucleotides with predetermined nucleotide sequence, particularly by machine synthesis. The groups opecified above, apart from those on silyl, are those particularly for the cyanocthyl phosphoramidate coupling. Uses of the oligoribonucleotide products in diagnosis, therapy, and as research tools, are well known, and are not dealt with in detail. (II) is an intermediate for (I). The silyloxymethyl halide reagent is easy to prepare, and yields are high. Introduction of the silyloxymethyl group into the ribonucleoside is simple and rapid, and the acetal bond formed does not migrate, eliminating particularly the prior art problem of 2 to 3 isomerisation. The methylenedloxy group spacer between the silyl group and nucleoside ring results in less steric hindrance than bulky direct silyloxy in results in less steric hindrance than bulky direct silyloxy coupling. Purer products are therefore obtained than in prior art, enabling larger quantities and longer chains of oligoribonucleotides to each anabling larger quantities and in shorter times
                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2-Silyloxymethyl ribonucleosides and their phosphonate derivatives - have high purity, use in machine synthesis of ribonucleic acids, enable longer oligonucleotide chain construction, and larger amounts.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to silyloxymethyl protected D- or L-ribonucleosides
                                                                                  Gaps
                                                                                                                                                                                                                                                                                                              Silyloxymethyl; phosphonate; silyloxymethyl halide; diagnosis; ss;
cyanoethyl phosphoramidate coupling; isomerisation; steric hindrance.
                                                                                  ô
                                                                                                                                                                                                                                                                                       Synthetic RNA sequence produced by the method of the invention.
                                                   Query Match
100.0%; Score 18; DB 2; Length 18;
Best Local Similarity 100.0%; Pred. No. 23;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 18 BP; 4 A; 4 C; 8 G; 0 T; 2 U; 0 Other;
                           Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
reactogenicity and are well tolerated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 7; Page 26; 38pp; English
                                                                                                                             1 TCTCCCAGCGTGCGCCAT 18
                                                                                                         1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jenny L;
                                                                                                                                                                                                          AAX27536 standard; RNA; 18 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-EP005215.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97CH-00001931.
                                                                                                                                                                                                                                                               27-MAY-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pitsch S, Weiss PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-180963/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (WEIS/) WEISS P A. (JENN/) JENNY L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PITS/) PITSCH S.
                                                                                                                                                                                                                                                                                                                                                                                     WO9909044-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                           17-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-AUG-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                25-FEB-1999
                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                     AAX27536,
                                                                                                                                                                            RESULT 11
AAX27536/c
ID AAX275:
XX
```

100.0%; Score 18; DB 2; Length 18;

Query Match

```
A pharmaceutical composition has been developed which comprises a nucleic acid and at least one penetration enhancer. The compositions are used: (i) to treat or prevent any disease or disorder that can be treated with the nucleic acid, e.g. cancer, Alzheimer's disease, beta-thalassemia, malaria, viral infections (including human immune deficiency virus (HIV)), inflammation, in human or animal medicine; (ii) to investigate the role of a gene or gene product in non-human animals; and (iii) to modulate gene expression in cells, tissues or organs. The compositions provide bloavallability of at least 15, preferably 17-35, %. The provide bloavallability of at least 15, preferably 17-35, %. The chances of the alimentary canal and into cells, and (ii) increases tability of the nucleic acid. Oral administration avoids the complications and expense of intravenous or other methods of administration. AAX18669 to AAX18799 and AAX18801 represent antisense clustention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Composition comprising nucleic acid and penetration enhancer - used particularly for delivering therapeutic antisense oligonucleotides across the gastrointestinal mucosa, provides high bioavailability.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cellular adhesion protein; proliferation; antisense oligonucleotide; alimentary canal; transport; gastrointestinal mucosa; cancer; Alzheimer's disease; beta-thalassemia; malaria; viral infection; HIV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 23; 0; Indels ive 0; Mismatches 0; Indels
                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                               ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Target bcl-2 antisense oligonucleotide BCL-2.
                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; Page 86; 115pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18
Best Local Similarity 100.0%; P
Matches 18; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTCCCAGCGTGCGCCAT 18
                                                                                       1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                       AAX18702 standard; DNA; 18 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98WO-US013574.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-00886829.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCTCCCAGCGTGCGCCAT
                                                                                                                             18 TCTCCCAGCGTGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                              10-MAY-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (ISIS-) ISIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-106077/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hardee G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inflammation; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUL-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9901579-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-JAN-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                  AAX18702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Teng C,
```

us-10-789-758a-2.rng

```
The present invention describes a composition comprising two oligonucleotide analogues, each having a binding domain and a coupling moieties of hybridizing to a target moietie and the coupling moieties are capable of coupling to each other in the absence of a target molecule. The composition/compound is used to cleave an RNA target. The compositions can be used to determine an optimal antisense site for a given mRNA or an optimal ribozyme cleaves it for a target RNA. By separating the antisense molecules into two or more pieces, a comprehensive antisense library can be prepared in advance, rather than synthesizing a plurarity of candidate antisense molecules as needed. A complete library of every possible 17-mer oligonucleotide, using the four natural bases, would consist of 417 or least two components, e.g. a library of 8-mers and a library of 9-mers, assembled quickly as needed, the library size is reduced to 48 + 20 or 327 650 molecules. The complexity of the library can be further sequence by substituting one or more universal or degenerate bases for some of the natural bases. The present sequence represent invention
                                                                                                                                                                                                                                                                         Oligonucleotide analog compositions capable of coupling to form antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Deletion sequence oligonucleotide; sensor array; eukaryotic pathogen; probe; cellular adhesion modulator; cellular proliferation modulator; human retrovirus; human immunodeficiency virus; non-human retrovirus; HIV; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Deletion sequence oligonucleotide 146.
                                                                                                                                                                                                                                                                                                                                     Example 9; Page 45; 71pp; English.
                                                                                                                                                                                     Arnold LJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                             BIOSCIENCES INC.
                                                                             97US-0060673P.
98US-00136080.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-US018084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-00923771.
                                       98WO-US020361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAX23693 standard; DNA; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JUN-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18; Conservative
                                                                                                                                                                                     Riley TA, Brown BD,
                                                                                                                                                                                                                             WPI; 1999-264039/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                             (OASI-) OASIS
                                       28-SEP-1998;
                                                                               02-OCT-1997;
18-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W09911820-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-SEP-1997;
15-APR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                 molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX23693;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAX23693
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes a formulation (A) comprising a cytosine-guanosine dinucleotide motif (CpG) oligomucleotide and T-independent type 1 or type 2 antigens or polysaccharide conjugate antigen. The present sequence represent a specifically claimed CpG oligomucleotide. A vaccine composition comprising the formulation is used for inducing a immune response to T-independent type 1 or type 2 antigen or polysaccharide conjugate antigen. The use of immunostimulatory CpG oligonucleotide acts as an adjuvant to pneumococcal polysaccharides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A vaccine composition for inducing a immune response to T-independent type 1 or type 2 antigen or polysaccharide conjugate antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conbinatorial antisense library, oligonucleotide analogue, RNase, ribozyme, cleavage, anchor, binding, target RNA, 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                       Cytosine-guanosine dinucleotide motif; CpG; immunomodulation; 
unmerbylated; vaccine; immunostimulation; immune response; 
T-independent type 1 antigen; T-independent type 2 antigen; 
polysaccharide conjugate antigen; se.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 23;
                                                                                                                                                                 Cytosine-guanosine dinucleotide motif oligonucleotide #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BCL2-targeted antisense oligonucleotide SEQ ID NO:45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laferriere CAJ, Prieels J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 6; Page 31; 35pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCTCCCAGCGTGCGCCAT 18
                                       AAX88537 standard; DNA; 18 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-EP008562.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97GB-00027262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAX33514 Btandard; DNA; 18
                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-405369/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dalemans WLJ,
                                                                                                                                                                                                                                                                                                                                                           WO9933488-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9918238-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                             18-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-JUL-1999
                                                                                                                       10-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                     08-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                               AAX88537;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX33514;
```

RESULT 14 AAX3351

ઠે 셤

ö

Gaps

ö

0; Indels

```
This invention describes a novel composition comprising a number of sensor arrays, where each array comprises a unique probe oligonucleotide, which is the reverse complement of part of a unique target oligonucleotides which is the reverse complement of target deletion sequence oligonucleotides. The compositions form a method for characterizing a sample of target deletion oligonucleotides which are labelled and thyridiate with the probe oligonucleotides of the sensor arrays. Such compositions that are useful for modulating cellular adhesion or proliferation, and being active against a eukaryotic pathogen, a human cretrovirus, a human immunodeficiency virus (HIV), or a non-human retrovirus, including influenza virus, Epstein-Barr virus, Respiratory Syncytial virus or cytomegalovirus (CMV). The compositions enable characterization of deletion sequence oligonucleotides having related, but different nucleobase sequences, and quantification of different compositions for the oligonucleotides in a mixture. Also, if the specificity of the oligonucleotides in an inture. It is not modified, the method may be performed using collapseexpressing oligonecal compositions.
                                                                                                                                      New compositions comprising sensor arrays made up of unique probe oligonuclectides - useful for characterizing a sample of target deletion oligonuclectides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.0%; Pred. No. 23; Length 18;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 18 BP; 2 A; 8 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                       Example 9; Page 152; 163pp; English
                   (ISIS-) ISIS PHARM INC.
                                                                  Chen D, Srivatsa GS;
                                                                                                           WPI; 1999-205198/17.
```

1 TCTCCCAGCGTGCGCCAT 18 rereceaecereceera 18 ઠે

ö

Gape ö

Search completed: May 4, 2006, 02:44:19 Job time : 137.414 secs

```
May 4, 2006, 03:52:26 ; Search time 42.2989 Seconds (without alignments) 840.478 Million cell updates/sec
GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                        2606114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Issued Patente NA:*

1: /cgn2_6/ptodata/1/ina/1_COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/1/ina/RE_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/H_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/PE_COMB.seq:*

7: /cgn2_6/ptodata/1/ina/PE_COMB.seq:*

8: /cgn2_6/ptodata/1/ina/PE_COMB.seq:*

9: /cgn2_6/ptodata/1/ina/PE_COMB.seq:*

9: /cgn2_6/ptodata/1/ina/RE_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                           1303057 segs, 888780828 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                          OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                 US-10-789-758A-6
20
1 tccatgacgttcctgacgtt 20
                                                                                                                                                                                                                                                                               IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                             Searched:
                                                                                                                    Run on:
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	18-09-133-774-12 Sequence 12, Appl 18-09-133-774-12 Sequence 12, Appl 18-09-303-862-10 Sequence 10, Appl 25-09-203-98-105 Sequence 10, Appl 25-09-206-098-105 Sequence 10, Appl 18-09-082-6498-51 Sequence 105, Appl 18-09-082-6498-51 Sequence 105, Appl 18-09-082-6498-58 Sequence 56, Appl 18-09-082-6498-58 Sequence 56, Appl 18-09-082-193A-90 Sequence 56, Appl 18-09-082-193A-90 Sequence 56, Appl 18-09-082-193A-90 Sequence 1, Appl 18-09-082-193A-10-97 Sequence 1, Appl 18-09-092-131A-42 Sequence 42, Appl 18-09-037-619-10 Sequence 42, Appl 18-09-084-16-42 Sequence 42, Appl 18-09-094-365-906-1 Sequence 2, Appl 18-09-257-188A-2 Sequence 1, Appl 18-09-257-188A-2 Sequence 2, Appl 18-09-09-257-188A-2 Sequence 2, Appl 18-09-09-09-09-09-09-09-09-09-09-09-09-09-
1	18. 09. 09. 09. 09. 09. 09. 09. 09. 09. 09
8	
Length	
& Query Match	
Score	
Result No.	1 1 2 2 2 4 3 2 5 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

		Heart		Heart
Sequence 58, Appl Sequence 42, Appl Sequence 14, Appl Sequence 13, Appl Sequence 70, Appl Sequence 60, Appl Sequence 60, Appl Sequence 50,		Modulating Inflammatory Heart e DNA encoding a	20; 1s 0; Gaps 0;	Modulating Inflammatory
US-09-965-101-58 US-10-697-055-42 US-10-517-013-14 US-09-917-2228-1 US-09-954-9818-83 US-09-672-1268-83 US-09-672-1268-83 US-09-082-6498-12 US-09-965-101-13 US-09-955-101-13 US-09-954-9878-131 US-09-030-701-39 US-09-030-701-39 US-09-030-701-39 US-09-031-70-64 US-09-31-170-64 US-09-31-170-64 US-09-31-170-64 US-09-31-131-170-64 US-09-31-170-64 US-09-31-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64 US-09-181-170-64	ALIGNMENTS	3774B el Peptides Capable of 09/133,774B s leotide derived from theine rich outer membran rachomatis.	; Score 20; DB 2; Length ; Pred. No. 1; 0; Mismatches 0; Indel TT 20 TT 20	ptides Capable of
1000.0 1000.0		Trick No. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100.0%; imilarity 100.0%; ; Conservative 0 TCCATGACGTTCCTGACGTT TCCATGACGTTCTGACGTT TCCATGACGTTCTGACGTT TCCATGACGTTCTCACGTT	RESULT 2 US-09-303-862-12 Sequence 12, Application US/09303862 Patent No. 6034230 GENERAL INFORMATION: APPLICANT: Bachmaier, Kurt APPLICANT: Hessel, Andrew J. APPLICANT: Neu M.D., Nikolaus TITLE OF INVENTION: No. 6034230el Pe, TITLE OF INVENTION: Disease FILE REFERENCE: A-536
25 26 27 29 20 20 31 31 20 33 34 20 33 34 17 40 17 41 17 41 17 42 17 44 16.8		RESULT 1 US-09-133-774-12 Sequence 12, Application of the patent No. 596636 GENERAL INFORMATION: APPLICANT: Bachmaier, AppliCANT: Hessel, An APPLICANT: Besel, An APPLICANT: Penninger, TITLE OF INVENTION: N. TITLE OF INVENTION: N. TITLE OF INVENTION: N. TITLE OF INVENTION: D. TITLE OF INVENTION: D. TITLE OF INVENTION: N. TITLE OF INVENTION: D. CURRENT APPLICATION: N. CURRENT APPLICATION: N. CURRENT PILLING DATE: N. NUMBER OF SEQ ID NOS: SOFTWARE: Patentin Version: SOFTWARE: Patentin Version: SOFTWARE: Chilamydia PRATURE: OTHER INFORMATION: G. OTHER INFORMATION: C. C. C. OTHER INFORMATION: C.	ry Match ry Match t Local S ches 20	RESULT 2 18-09-303-862-12 Sequence 12, App Patent No. 60342; GENERAL INFORMAT APPLICANT: Hess APPLICANT: Hess APPLICANT: Neu 1 APPLICANT: Penn TITLE OF INVENT TITLE OF INVENT FILE REFERENCE:
υυ		80 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	, , ,	8

```
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

APPLICANT: Schwartz, David A.

APPLICANT: Schwartz, David A.

TITLE OF INVENTION: USE OF NUCLEIC ACIDS CONTAINING

TITLE OF INVENTION: UNMETHYLATED CpG DINUCLEOTIDE IN THE TREATMENT OF

TITLE OF INVENTION: LPS-ASSOCIATED DISORDERS

FILE REFERENCE: C1039/7011

CURRENT APPLICATION NUMBER: US/09/030,701B

PRIOR PLILING DATE: 1998-02-25

PRIOR FILING DATE: 1997-02-28
                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10. Application US/08738652B

Patent No. 6207646

GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

TITLE OF INVENTION:

FILE REFERENCE: C1039/7004 HCL

CURRENT FILING DATE: 1996-10-30

EARLIER PPLICATION NUMBER: US 08/276,358

SARLIER FILING DATE: 1994-07-15

EARLIER FILING DATE: 1994-07-15

EARLIER FILING DATE: 1995-00-07

NUMBER OF SEQ ID NOS: 55

SOFTWARE: PSECSEQ for Windows Version 3.0

LENGTH: 20
                                                                                                                                                                                                                                      FEATURE:
OTHER INFORMATION: An oligonucleotide derived from the DNA enco OTHER INFORMATION: 60 kDa cysteine rich outer membrane protein OTHER INFORMATION: Chlamydia trachomatis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    i OTHER INFORMATION: Synthetic oligonucleotide
US-08-738-652-10
CURRENT APPLICATION NUMBER: US/09/303,862
CURRENT FILING DATE: 1999-05-03
EARLIER APPLICATION NUMBER: 09/133,774
EARLIER FILING DATE: 1998-08-12
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 12
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 62, Application US/09030701B Patent No. 6214806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 TCCATGACGITCCTGACGIT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rccardacerrccrdacerr 20
                                                                                                                                                                                          TYPE: DNA ORGANISM: Chlamydia trachomatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 3
US-08-738-652-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-030-701-62
                                                                                                                                                                                                                                                                                                                                      US-09-303-862-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
```

```
Sequence 105. Application US/09286098
; Sequence 105. Application US/09286098
; Patent No. 6218371
; GENERAL INFORMATION:
; APPLICANT: Weiner, George
; TITLE OF INVENTION: Methods and Products for Stimulating the
; TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
; TITLE OF INVENTION: Cytokines
; TITLE OF INVENTION: Cytokines
; FILE REPERRING: C1039/7026/HCL
; CURRENT APPLICATION NUMBER: US/09/286,098
; CURRENT FILING DATE: 1999-04-02
; EARLIER PILING DATE: 1998-04-03
; NUMBER OF SEQ ID NOS: 105
; SEQ ID NO 105
; SEQ ID NO 105
; LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 100, Application US/09286098

Sequence 100, Application US/09286098

Patent No. 6218371

GENERAL INFORMATION:
APPLICANT: Wries, Arthur M.
APPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
TITLE OF INVENTION: Tytokines
TITLE OF INVENTION: Cytokines
FILE REFERENCE: C1039/7026/HCL
CURRENT APPLICATION NUMBER: US/09/286,098
CURRENT FILING DATE: 1999-04-02

BARLIER PILING DATE: 1998-04-02

NUMBER OF SEQ ID NOS: 105

SOFTWARE: FastSEQ for Windows Version 3.0

LENTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                    core 20; DB 3; Length 20;
red. No. 1;
Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1; ive 0; Mismatches 0; Indels
                                                                                                                                                         ; OTHER INFORMATION: synthetic oligonucleotide US-09-030-701-62
NUMBER OF SEQ ID NOS: 65
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 62
LENGTH: 20
                                                                                                                                                                                                                           Score 20;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , OTHER INFORMATION: Synthetic Sequence
US-09-286-098-100
                                                                                                                                                                                                        100.0%; Scc.
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA ORGANISM: Artificial Sequence
                                                                                         TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 100. Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
US-09-286-098-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-09-286-098-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
```

```
Krieg, Arthur M. Schorr, Joachim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                        TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 92037

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ACII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/960,774
FILING DATE: 30-October-1997
CLASSIFICATION: 514
PRIOR APPLICATION BATA:
APPLICATION NUMBER: U.S. Serial NO. 6239116 08/738,652
FILING DATE: October 30, 1996
CLASSIFICATION: 514
ATYCRNEY/AGENT INFORMATION:
NAME: Haile, Lisa A.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 08918/012001
TELLECOMMUNICATION INPORMATION:
TELLECOMMUNICATION INPORMATION:
TELLECOMMUNICATION INPORMATION:
TELLECOMMUNICATION INPORMATION:
                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT:
APPLICANT:
TILE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
NUMBER OF SEQUENCES: 111
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
STREET: 4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 20; DB 3; Length 20;
Pred. No. 1;
                                                                                             100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                   OTHER INFORMATION: Synthetic Sequence US-09-286-098-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-082-649B-51
; Sequence 51, Application US/09082649B
; Patent No. 6339068
; GENERAL INPORMATION:
                                                                                                                                                                                                                                                                               RESULT 7
US-08-960-774-10
'Sequence 10, Application US/08960774
'Patent No. 6233116
                                                                                                                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 rccarcaccirccrcaccir 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELERAX: 619/678-5099
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Davis, Heather L.
                                                                                                                Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: La
STATE: CA
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-960-774-10
                                                                                                  Query Match
                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Exieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schorr, Joachim
APPLICANT: Schorr, Joachim
APPLICANT: Wu, Tong
TITLE OF INVENTION: Vectors and Methods for Immunization or
TITLE OF INVENTION: Therapeutic Protocols
FILE REFERENCE: C1039/7009
CURRENT APPLICATION WUMBER: US/09/082,649B
CURRENT FILING DATE: 1998-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
PRIOR FILING DATE: 1997-05-20
APPLICANT: WL. TOTAL STATES AND METHODS FOR IMMUNIZATION OF TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Therapeutic Protocols FILE REPERENCE: C1039/7009 CURRENT FILING DATE: 1998-05-20 PRIOR APPLICATION NUMBER: US 60/047,209 PRIOR APPLICATION NUMBER: US 60/047,209 PRIOR APPLICATION NUMBER: US 60/047,209 PRIOR PRIOR PRIOR DATE: 1997-05-20 NUMBER OF SEQ ID NOS: 85 SOFTWARE: FABELSEQ for Windows Version 3.0 SEQ ID NO 51 LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match

100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: synthetic oligonucleotide

NAME/KEY: misc_feature

LOCATION: (0)...(0)

OTHER INFORMATION: Has a phosphorothioate backbone.

US-09-082-649B-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; LOCATION: (0)...(0); OTHER INFORMATION: Has phosphodiester backbone US-09-082-649B-56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 85
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 56
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-082-649B-56; Sequence 56, Application US/09082649B; Patent No. 6339068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.
Matches 20; Conservative
```

ö

.

```
RESULT 13
US-09-191-170-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 97
Matches
                                                                    Š
                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
US-09-325-193A-86

Sequence 86, Application US/09325193A
Sequence 86, Application US/09325193A
Sequence 86, Application US/09325193A
GENERAL INFORMATION:
APPLICANT: Bavis, Heather L.
APPLICANT: Schorr, Joachim
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
FILE REFERENCE: C1039/7025/HCL
CURRENT APPLICATION NUMBER: US/09/325,193A
CURRENT PILING DATE: 1999-06-03
PRIOR PPLICATION NUMBER: PCT/US98/04703
PRIOR PILING DATE: 1998-03-16
PRIOR PILING DATE: 1998-03-10
PRIOR FILING DATE: 1998-03-10
NUMBER OF SEQ ID NOS: 98
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 20
TANDE DATE: 100-03-10
TANDE DATE: 100-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
OTHER INFORMATION: synthetic oligonucleotide
NAME/KEY: misc_feature
LOCATION: (0) ...(0)
OTHER INFORMATION: Backbone is phosphorothicate--phosphodiester
OS-09-082-6498-58
                                                                                                                                                                                            APPLICANT: National Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schort, Joachim
APPLICANT: Schort, Joachim
APPLICANT: Wi, Tong
1 TITLE OF INVENTION: Therapeutic Protocols
1 FILE REPERBURE: 08/09/082,649B
1 CURRENT APPLICATION NUMBER: US 60/047,233
1 PRIOR FILING DATE: 1997-05-20
1 PRIOR FILING DATE: 1997-05-20
1 PRIOR FILING DATE: 1997-05-20
1 NUMBER OF SEQ ID NOS: 85
1 SEQ ID NO 58
1 LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 20; DB 3; Length 20; Pred. No. 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 3;
1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; FEATURE:
- OTHER INFORMATION: Synthetic Oligonucleotide
US-09-325-193A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 20;
Pred. No.
                                                                                   Sequence 58, Application US/09082649B
Patent No. 6339068
GRNERAL INFORMATION: APPLICANT: Davis, Heather L.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schorr, Joachim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 rccardacerrccreacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.04;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
100.0%;
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                             US-09-082-649B-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Davis, Heather L.
APPLICANT: Schort, Joachim
APPLICANT: Schort, Joachim
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Use of Nucleic Acids Containing
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
FILE REFERENCE: C1039/7025/HGL
CURRENT APPLICATION NUMBER: US/09/325,193A
CURRENT FILING DATE: 1999-06-03
FRIOR APPLICATION NUMBER: US 09/154,614
FRIOR PELING DATE: 1998-09-16
FRIOR FILING DATE: 1998-03-10
FRIOR FILING DATE: 1998-03-10
FRIOR FILING DATE: 1998-03-10
FRIOR FILING DATE: 1998-03-10
FRIOR FILING DATE: 1999-03-10
FRIOR FILING DATE: 1997-03-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 97, Application US/09191170
Sequence 97, Application US/09191170
Sequence 97, Application US/09191170
Sequence 100 6429199
Sequence 100 6429199
September 100 6429199
TOTHE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE APPLICATION NUMBER: US 08/990,774
EARLIER FILING DATE: 1996-10-30
EARLIER FILING DATE: 1996-10-30
EARLIER FILING DATE: 1996-07
EARLIER FILING DATE: 1996-07
EARLIER FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 99
NUMBER OF SEQ ID NOS: 99
SOFTWARE: FRANCE: FRANCE: Mindows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1; cive 0; Mismatches 0; Indels
Indels
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-325-193A-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: synthetic oligonucleotide
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                      US-09-325-193A-90
; Sequence 90, Application US/09325193A
; Patent No. 6406705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 rccardacerrccrdacerr 20
                                                                               1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                        rccargacgrrccrgacgrr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.0
Matches 20; Conservative
20; Conservative
```

```
ઠે
                                                            g
                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
CRGANISM: Artifical Sequence
FEATURE:
CTHER INFORMATION: Immunostimulatory oligonucleotide sequence comprising
CTHER INFORMATION: one or more CpG motifs
US-09-301-829A-1
                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1; Matches 20; Conservative 0; Mismatches 0; Indels
                                           Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                         Sequence 1, Application US/0969021
| Patent No. 6544518
| GENERAL INFORMATION:
| APPLICANT: Friede, Martin
| APPLICANT: Hermand, Catherine
| APPLICANT: Hermand, Philippe
| TITLE NO INVENTION: Vaccines
| PITLE REFERENCE: B45181-1
| CURRENT APPLICATION NUMBER: US/09/690,921
| CURRENT FILING DATE: 2000-10-18
| PRIOR FILING DATE: 2000-04-04
| PRIOR APPLICATION NUMBER: 09/301,829
| PRIOR FILING DATE: 1999-04-29
| PRIOR FILING DATE: 1999-04-29
| PRIOR FILING DATE: 1999-04-29
| PRIOR FILING DATE: 1999-04-19
| NUMBER OF SEQ ID NOS: 5
| SEQ ID NO 1
| LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/09301829A
Sequence 1, Application US/09301829A
Sequence 1, Application US/09301829A
SENERAL INFORMATION:
APPLICANT: Friede, Martin
APPLICANT: Friede, Martin
APPLICANT: Friede, Martin
CURRENT Hermand, Philippe
TITLE OF INVENTION: VACCINES
FILE REFERENCE: B45181
CURRENT APPLICATION NUMBER: US/09/301,829A
CURRENT FILING DATE: 1999-04-29
FRIOR PHILOR DATE: 1999-04-19
NUMBER OF SEQ ID NOS: 3
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 1
LENGTH: 20
                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                       1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TYPE: DNA
; ORGANISM: Human
US-09-690-921-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-301-829A-1
US-09-191-170-97
                                                                                                                                                                                                                                                       RESULT 14
US-09-690-921-1
                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

Search completed: May 4, 2006, 07:23:50 Job time: 42.2989 secs

This Page Blank (uspto)

```
4, 2006, 03:52:26; Search time 42.2989 Seconds
(without alignments)
840.478 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Description
5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                          2606114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Issued Patents NA:*

1: /cgn2_6/ptodata/1/ina/1_COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/H_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

7: /cgn2_6/ptodata/1/ina/PCOMB.seq:*

8: /cgn2_6/ptodata/1/ina/PCOMB.seq:*

9: /cgn2_6/ptodata/1/ina/PCOMB.seq:*

9: /cgn2_6/ptodata/1/ina/RE_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                1303057 segs, 888780828 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
GenCore version
Copyright (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                          OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                             1 tccatgacgttcctgacgtt 20
                                                                                                                                                                                                                                                                                 IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                                                                                          US-10-789-758A-1
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match Length DB
                                                                                                                     Мау
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ............
                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database :
                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Result
```

Sequence 58, Appl Sequence 12, Appl Sequence 11, Appl Sequence 13, Appl Sequence 13, Appl Sequence 12, Appl Sequence 13, Appl Sequence 13, Appl Sequence 13, Appl Sequence 131, Appl Sequence 131, Appl Sequence 70, Appl Sequence 60, Appl Sequence 60, Appl Sequence 61, Appl Sequence 34, Appl Sequence 36, Appl Sequence 37, Appl Sequence 36, Appl Sequence 26, Appl Sequence 27, Appl Sequence 28, Appl		ble of Modulating Inflammatory Heart from the DNA encoding a membrane protein from	Length 20; Indels 0; Gaps 0;		of Modulating Inflammatory Heart
3 US-09-965-101-58 3 US-10-697-055-42 3 US-10-697-013-14 3 US-09-917-2228-1 3 US-09-917-2228-1 3 US-09-967-1268-83 3 US-09-082-6498-13 3 US-09-965-101-13 3 US-09-965-101-13	ALIGNMENTS 5/09133774B	6el Peptides Capa /09/133,774B 18 cleotide derived teine rich outer trachomatis.	Score 20; DB 2; Pred. No. 1; 0; Mismatches 0;	acgrr 20 acgrr 20	on US/09303862 Kurt Irew J. 1kolaus 10sef M. 5. 6034230el Peptides Capable isease
25 20 100.0 20 25 27 20 100.0 20 27 20 100.0 20 20 29 20 100.0 20 20 31 20 100.0 20 20 33 20 100.0 44 40 20 20 20 20 20 20 20 20 20 20 20 20 20	AL RESULT 1 US-09-133-774-12 ; Sequence 12, Application US/09133774	"N. D. J.	Query Match Best Local Similarity 100.0%; Matches 20; Conservative	Oy 1 TCCATGACGTTCCTGACGTT	RESULT 2 US-09-303-862-12 Sequence 12, Application US/09303862 Fatent No. 6034230 GENERAL INFORMATION: APPLICANT: Bachmaier, Kurt APPLICANT: Hessel, Andrew J. APPLICANT: New Mo., Nikolaus APPLICANT: Penninger, Josef M. TITLE OF INVENTION: No. 6034230el P. TITLE OF INVENTION: Disease FILE REFERENCE: A-536

```
Query Match
Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                  Best Local Similarity 100.
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
US-09-286-098-105
                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 5
US-09-286-098-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-286-098-100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 105
LENGTH: 20
                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 62, Application US/09030701B

Patent No. 6214806
GRNERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, David A.
TITLE OF INVENTION: UNE OF NUCLEIC ACIDS CONTAINING
TITLE OF INVENTION: UNBEHYLATED DISORDERS
FILE REPERENCE: C1039/7011
CURRENT APPLICATION NUMBER: US/09/030,701B
CURRENT PILING DATE: 1998-02-25
PRIOR FILING DATE: 1997-02-28
                                                                                                                                                                                                                                                  OTHER INFORMATION: An oligonucleotide derived from the DNA encoding a OTHER INFORMATION: 60 kDa cysteine rich outer membrane protein from OTHER INFORMATION: Chlamydia trachomatis.
                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Krieg, Arthur M.
ITTLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FITE REFERENCE: C1039/7004 HCL.
CURRENT APPLICATION NUMBER: US/08/738,652B
CURRENT FILING DATE: 1996-10-30
EARLIER FILING DATE: 1996-07-15
EARLIER RPLICATION NUMBER: US 08/276,358
EARLIER PLICATION NUMBER: US 08/386,063
EARLIER PLICATION NUMBER: US 08/386,063
EARLIER FILING DATE: 1995-02-07
NUMBER OF SEQ ID NOS: 55
SOFTWARE: FastSEQ for Windows Version 3.0
EANCIP: 100 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 20; DB 3; Length 20;
Pred. No. 1;
                                                                                                                                                                                                                                                                                                                                                                  Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Synthetic oligonucleotide US-08-738-652-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        red. No. 1;
Mismatches
CURRENT APPLICATION NUMBER: US/09/303,862
              CURRENT FILING DATE: 1999-05-03
RARLIER APPLICATION NUMBER: 09/133,774
FARLIER PLING DATE: 1998-08-12
NUMBER OF SEQ ID NOS: 26
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 12
TYPE: DNA
CNEGANISM: Chlamydia trachomatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10, Application US/08738652B Patent No. 6207646 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.0%; Pr
Matches 20; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -09-030-701-62
                                                                                                                                                                                                                                                                                                                           US-09-303-862-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
```

```
Sequence 100, Application US/09286098

Sequence 100, Application US/09286098

BENERAL INFORMATION:
APPLICANT: Karies, Arthur M.
TITLE OF INVENTION: Methods and Products for Stimulating the TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and TITLE OF INVENTION: Cytokines
TITLE OF INVENTION: Timmune System Using Immunotherapeutic Oligonucleotides and TITLE OF INVENTION: Cytokines
FILE REPERRENCE: C1039/7026/HCL
CURRENT FILING DATE: 1999-04-02

CURRENT FILING DATE: 1999-04-02

BARLIER PILING DATE: 1998-04-03

NUMBER OF SEQ ID NOS: 105

SOFTWARE: FastSEQ for Windows Version 3.0

LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 105, Application US/09286098

Sequence 105, Application US/09286098

Patent No. 6218371

GENERAL INFORMATION:

APPLICANT: Krieg, Arthur M.

APPLICANT: Weiner, George

TITLE OF INVENTION: Methods and Products for Stimulating the

TITLE OF INVENTION: Tamune System Using Immunotherapeutic Oligonucleotides and

TITLE OF INVENTION: Cytokines

FILE REFERENCE: C1039/7026/HGL

CURRENT FILING DATE: 1999-04-02

CURRENT FILING DATE: 1999-04-02

EARLIER APPLICATION NUMBER: US 60/080,729

MUMBER OF SEQ ID NOS: 105

SOFTWARE: FREESEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                         100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1; cive 0; Mismatches 0; Indels
                                                                                                                                                                                           ) OTHER INFORMATION: synthetic oligonucleotide US-09-030-701-62
NUMBER OF SEQ ID NOS: 65
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 62
LENOTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Synthetic Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                              1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                 TYPE: DNA
ORGANISM: Artificial Sequence
```

쇰

ð

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WS-09-082-649B-56

| Sequence 56, Application US/09082649B |
| Septicant: Davis, Heather L. |
| APPLICANT: Schort, Joachim |
| APPLICANT: Schort, Joachim |
| APPLICANT: Wu, Tong |
| TITLE OF INVENTION: Vectors and Methods for Immunization or |
| TITLE OF INVENTION: Vectors and Methods for Immunization or |
| TITLE OF INVENTION: Vectors and Methods for Immunization or |
| TITLE OF INVENTION: 1039/7009 |
| CURRENT FILING DATE: 1998-05-20 |
| PRIOR APPLICATION NUMBER: US 60/047,209 |
| PRIOR PILING DATE: 1997-05-20 |
| PRIOR FILING DATE: 1997-05-20 
APPLICANT: Krieg, Arthur M.

APPLICANT: Schorr, Joachim
APPLICANT: W., Tong
TITLE OF INVENTION: Therapeutic Protocols
CURRENT APPLICATION NUMBER: US/09/082,649B
CURRENT FILING DATE: 1998-05-20
PRIOR PAPLICATION NUMBER: US 60/047,233
PRIOR PAPLICATION NUMBER: US 60/047,209
PRIOR APPLICATION NUMBER: US 60/047,209
PRIOR APPLICATION NUMBER: US 60/047,209
SPRIOR APPLICATION NUMBER: US 60/047,209
SPRIOR APPLICATION NUMBER: US 60/047,209
SPRIOR PRING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 85
SEQ ID NO 51
SEQ ID NO 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1; Astches 0; Indels Matches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: synthetic oligonucleotide
NAME/KEY: misc_feature
LOCATION: (0)...(0)
OTHER INFORMATION: Has a phosphorothioate backbone.
US-09-082-649B-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 85
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 56
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 rccargacerrccrcacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCIL text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/960,774
FILING DATE: 30-October-1997
CLASSIFICATION DATA:
APPLICATION NUMBER: U.S. Serial No. 6239116 08/738,652
FILING DATE: October 30, 1996
CLASSIFICATION S14
ATTORNEY/AGENT INFORMATION:
NAME: Haile, Liea A.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 08918/012001
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRENCE (19/678-5079)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Krieg et al.,
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
NUMBER OF SEQUENCES: 111
CORRESPONDENCE ADDRESS:
ADDRESSEB: Fish & Richardson P.C.
STREET: 4225 Executive Square, Suite 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 20; DB 3; Length 20; Pred. No. 1; Mismatches 0; Indels
                                                                                                                                                                                   Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                            FEATURE:
CTHER INFORMATION: Synthetic Sequence US-09-286-098-105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-082-649B-51

Sequence 51, Application US/09082649B

; Patent No. 6339068

; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10, Application US/08960774 Patent No. 6239116
                                                                                                                                                                                                                                                                                                                                                                      1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 rccarcacerrccrcacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 619/6/8-5000 INFORMATION FOR SEQ ID NO: 10: SEQUENCE CHARACTERISTICS: 1. RNGTH: 20 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 20; Conservative 0
           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Davis, Heather L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE: CA
COUNTRY: USI
ZIP: 92037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
US-08-960-774-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-960-774-10
```

ö

Gaps

ö

Gaps

셤

Gaps

ö

```
APPLICANT: Schorr Joachim
APPLICANT: Schorr Joachim
APPLICANT: Schorr Joachim
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Use of Nucleic Acids Containing
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
FILE REFREENCE: C1039/7025/HCL
CURRENT APPLICATION NUMBER: US/09/325,193A
CURRENT FILING DATE: 1999-06-03
PRIOR APPLICATION NUMBER: US/09/154,614
PRIOR PLILING DATE: 1998-09-16
PRIOR PLILING DATE: 1998-03-10
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1998-03-10
PRIOR FILING DATE: 1997-03-10
NUMBER OF SEQ ID NOS: 98
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: KITCHEGA, Arthur M.
APPLICANT: MITCHEGA, Arthur M.
APPLICANT: Hartmann, Gunther
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Cor Acciduating Dendritic Cells
TITLE OF INVENTION: Cor Acciduating Dendritic Cells
FILE REFERENCE: C1039/7017
CURRENT APPLICATION NUMBER: US/09/191,170
CURRENT FILING DATE: 1998-11-13
EARLIER APPLICATION NUMBER: US 08/386,063
EARLIER FILING DATE: 1996-10-30
EARLIER FILING DATE: 1995-0-07
EARLIER FILING DATE: 1995-0-07
EARLIER FILING DATE: 1995-0-07
EARLIER FILING DATE: 1994-07-15
NUMBER OF SEQ ID NOS: 99
SOFTWARE: FREESEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
Indels
.
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE: OTHER INFORMATION: synthetic oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Synthetic Oligonucleotide US-09-325-193A-90
0; Mismatches
                                                                                                                                                                               RESULT 12
US-09-325-193A-90
; Sequence 90, Application US/09325193A
; Patent No. 6406705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 97, Application US/09191170 Patent No. 6429199
                                                                                                 1 rccardacerrccrdacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 rccardacdrrccrdacdrr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: Artificial Sequence
20; Conservative
                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Davis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-191-170-97
  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                              셤
                                                   à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-325-193A-8

Sequence 86, Application US/09325193A

Sequence 86, Application US/09325193A

Sequence No. 6406705

GENERAL INFORMATION:
APPLICANT: Brais, Arthur M.
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant
FILE REFERENCE: C1039/7025/HCL
CURRENT APPLICATION NUMBER: US 09/154,614

PRIOR APPLICATION NUMBER: US 09/154,614

PRIOR PILING DATE: 1998-09-16

PRIOR PILING DATE: 1998-03-10

PRIOR FILING DATE: 1998-03-10

NUMBER OF SEQ ID NOS: 98

NUMBER OF SEQ ID NOS: 98

SOFTWARE: FastSEQ for Mindows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                Sequence 58, Application US/09082649B
Patent No. 6339068
GENERAL INFORMATION:
APPLICANT: Davis, Heather L.
APPLICANT: Editor, Joachim
APPLICANT: Schorr, Joachim
TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: Vectors and Methods for Immunization or TITLE OF INVENTION: The sequent C Protocols
FILE REFERENCE: C139/7009
CURRENT APPLICATION NUMBER: US/09/082,649B
CURRENT APPLICATION NUMBER: US 60/047,233
PRIOR PILING DATE: 1997-05-20
PRIOR APPLICATION NUMBER: US 60/047,209
PRIOR APPLICATION NUMBER: US 60/047,209
PRIOR SEQ ID NOS: 85
NUMBER OF SEQ ID NOS: 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: synthetic oligonucleotide
NAME/KEY: misc_feature
COTATION: (0)...(0)
COTHER INFORMATION: Backbone is phosphorothioate--phosphodiester
US-09-082-649B-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20; DB 3; Length 20;
Pred. No. 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 20; DB 3;
Pred. No. 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
) OTHER INFORMATION: Synthetic Oligonucleotide
U8-09-325-193A-86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 rccardacerrcraacerr 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                -09-082-649B-58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 58
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 86
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
```

ö

Gaps

```
g
                             ð
                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Immunostimulatory oligonucleotide sequence comprising OTHER INFORMATION: one or more CpG motifs US-09-301-829A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match

100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                              Query Match
Best Local Similarity 100.0%; Pred. No. 1;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                         Sequence 1, Application US/09690921
| Patent No. 6544518
| GENERAL INFORMATION:
| APPLICANT: Friede, Martin
| APPLICANT: Hermand, Catherine
| APPLICANT: Hermand, Philippe
| TITLE REFERENCE: B45181-1
| CURRENT APPLICATION NUMBER: US/09/690,921
| CURRENT FILING DATE: 2000-10-18
| PRIOR FILING DATE: 2000-4-04
| PRIOR FILING DATE: 1999-04-29
| PRIOR FILING DATE: 1999-04-29
| PRIOR FILING DATE: 1999-04-19
| NUMBER: OF SEQ ID NOS: 5
| SOFTWARE: FastSEQ for Windows Version 3.0
| SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/09301829A
; Sequence 1, Application US/09301829A
; Patent No. 6558670
; GENERAL INFORMATION:
    APPLICANT: Friede, Martin
    APPLICANT: PASSES 845181
    CURRENT APPLICATION NUMBER: US/09/301,829A
    CURRENT FILING DATE: 1999-04-29
    PRIOR APPLICATION NUMBER: GB9908885.8
    PRIOR APPLICATION NUMBER: 1999-04-19
    NUMBER OF SEQ ID NOS: 3
    SOFTWARE: FRSESQ for Windows Version 3.0
    SEQ ID NO 1
    LENGTH: 20
    TYPE: DNA
    ORGANISM: Artifical Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                          1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 TCCATGACGTTCCTGACGTT 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0
Matches 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Human
US-09-191-170-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-301-829A-1
                                                                                                                                                                                                                                                       RESULT 14
US-09-690-921-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-690-921-1
                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

Search completed: May 4, 2006, 07:23:50 Job time : 42.2989 secs

This Page Blank (uspto)

```
MOLECULE TYPE: other nucleic acid DESCRIPTION: Synthetic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 33
TELECOMMUNICATION INFORMATION:
TELEPHONE: (408) 436-2070
TELEPAX: (408) 436-2075
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 18 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
 San Jose
California
                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 95110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
100.
                                                                                                                                                                                                                                                   RESULT 1
US-08-217-082A-17
                                                                                                                                                                                                                                                                                                                                                                                      STATE: Ca
                                                                                                                                                                                                                                                                                                                                                                   STREET:
CITY: Sa
2, Appli
2, Appli
                                                            4, 2006, 03:52:26 ; Search time 38.069 Seconds (without alignments) 840.478 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 218,
Sequence 1, Ap
Sequence 55, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 17,
Sequence 24,
Sequence 17,
Sequence 24,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 17,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence Sequence Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
        GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd
                                                                                                                                                                                          2606114
                                                                                                                                                                                                                                                                           | Gened Patents NA:*
| Cgn2_6/ptodata/1/ina/1_COMB.seq:*
| Cgn2_6/ptodata/1/ina/5_COMB.seq:*
| Cgn2_6/ptodata/1/ina/6_COMB.seq:*
| Cgn2_6/ptodata/1/ina/6B_COMB.seq:*
| Cgn2_6/ptodata/1/ina/H_COMB.seq:*
| Cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
| Cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
| Cgn2_6/ptodata/1/ina/PCOMB.seq:*
| Cgn2_6/ptodata/1/ina/PP_COMB.seq:*
| Cgn2_6/ptodata/1/ina/RE_COMB.seq:*
| Cgn2_6/ptodata/1/ina/RE_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-465-485A-17
US-08-065-485A-17
US-09-080-285-17
US-09-080-285-24
US-09-118-220-1
US-09-118-220-1
US-09-300-701-27
US-09-300-701-27
US-09-300-701-27
US-09-300-701-27
US-09-300-701-27
US-09-300-701-27
US-09-300-701-27
US-09-300-701-45
US-09-300-701-45
US-09-300-701-45
US-09-300-701-45
US-09-300-701-45
US-09-301-170-53
US-09-191-170-53
                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -09-301-829A-2
-09-249-247-218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JS-09-337-619-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-835-370-21
US-09-634-320-7
                                                                                                                                                                      1303057 seqs, 888780828 residues
                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                           OM nucleic - nucleic search, using sw model
                                                                                                                                        IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                      1 tctcccagcgtgcgccat 18
                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                               US-10-789-758A-2
18
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Мау
                                                                                                                                         Scoring table:
                                                                                                             Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                      Searched:
                                                                                                                                                                                                                                                                              Database
                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Result
```

```
Appli
Appli
Appl
Appl
Appli
Appli
Appli
Appli
                                                                                          Sequence 6, Appli
Sequence 34, Appl
Sequence 21, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 17, Application US/08217082A
Patent No. 5734033
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Reed, John
TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDES FOR INHIBITING THE
TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDES FOR INHIBITING THE
TITLE OF INVENTION: ANTISENSE OLIGONUCLEOTIDES FOR INHIBITING THE
TITLE OF INVENTION: ANTISENSE ORIGINAL SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,
ADDRESSEE: P.C.
                                                                                                                                                                                                                                               Sequence 60,
Sequence 60,
Sequence 1, A
                                                                                                                                                              Sequence 115,
Sequence 110,
                                                                                                                                                                                                     Sequence 8,
                                                                                                                                                                                                                                                                                                                   Sequence 2
Sequence 1
Sequence 8
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/217,082A
FILING DATE: 24-MAR-1994
CLASSIFICATION: 435
FILING APPLICATION DATA:
APPLICATION NUMBER: US 07/840,716
FILING DATE: 21-FEB-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/88,692
FILING DATE: 22-DEC-1988
ATTORNEY/AGENT INFORMATION:
NAMME: FORTINE ANDREW D.
US-09-654-373-14
US-09-724-425-17
US-09-724-425-24
US-09-724-425-24
US-09-108-673A-14
US-09-108-673A-34
US-09-95-480A-6
US-09-95-490B-115
US-09-95-4-987B-115
US-09-634-320-9
US-09-634-320-9
US-09-634-320-9
US-09-634-320-9
US-09-634-320-2
US-09-634-320-2
US-09-634-320-2
US-09-634-320-2
US-09-634-320-2
US-09-634-320-2
US-09-634-320-2
US-09-634-320-2
US-08-610-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3335-067-55 FWC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Fortney, Andrew D. REGISTRATION NUMBER: 34,600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              224 Airport Parkway
```

```
GENERAL INFORMATION:
APPLICANT: Read, John
TITLE OF INVENTION: Regulation of bc1-2 Gene Expression
NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
ADDRESSEE: 09LON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,
ADDRESSEE: P.C.
STREET: 1755 S. Jefferson Davis Hwy., Suite 400
CITY: Arlington
STATE: Virginia
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
BEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              à
                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                               Gaps
                                                                                                               .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                             NESON 12 (1) Application US/08465485A; Sequence 17, Application US/08465485A; Patent No. 5831066; Patent No. 1711E OF INVENTION: Regulation of bcl-2 Gene Expression NUMBER OF EQUENCES: 29; CORRESPONDENCE ADDRESSE: P.C. ADDRESSE: P.C. STRRET: P.C. STRRET: 1755 S. Jefferson Davis Hwy., Suite 400 CITY: Alington STATE: Virginia COUNTRY: U.S.A. 21P: 22202; COMPUTER READABLE FORM: MEDIUM TYPE: Ploppy disk MEDIUM TYPE: Ploppy disk COMPUTER P. TRW PC. COMPUTER: Ploppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 18; DB 2; Length 18; ilarity 100.0%; Pred. No. 10; Conservative 0; Mismatches n. Train
                                                   Query Match
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/465,485A
FILING DATE: 05-JUN-1995
CLASSIFICATION: 514
PRIOR APPLICATION NUMBER: US/08/124,256
FILING DATE: 20-SEP-1993
PRIOR APPLICATION NUMBER: US 08/124,256
FILING DATE: 20-SEP-1993
PRIOR APPLICATION NUMBER: US 07/840,716
FILING DATE: 21-FEB-1992
PRIOR APPLICATION NUMBER: US 07/288,692
FILING DATE: 22-DEC-1988
ATPLICATION NUMBER: US 07/288,692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Fortney, Andrew D.
REGISTRATION NUMBER: 345-070-55 CONT
TELECOMMUNICATION INFORMATION:
TELEPRONE: (408) 436-2070
TELEPRONE: (408) 436-2075
INFORMATION FOR SEQ ID NO: 17:
SEQUENCE CHARACTERISTICS:
LENGTH: 18 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                  1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
TOPOLOGY:
US-08-465-485A-17
        US-08-217-082A-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: Modified_base
LOCATION: 16..17
OTHER INFORMATION: Last two internucleoside linkages are
OTHER INFORMATION: phosphorothioates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 18; DB 2; Length 18; 100.0%; Pred. No. 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION REED, John
TITLE OF INVENTION: Regulation of bcl-2 Gene Expression
NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,
ADDRESSEE: P.C.
CURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE:

CLASSIFFATION:

FILING DATE:

APPLICATION NUMBER:

APPLICATION NUMBER:

FILING APPLICATION DATA:

APPLICATION NUMBER:

APPLICATION NUMBER:

FILING DATE:

TELEPHONE:

TELEPHONE:

TELEPHONE:

TELEPHONE:

APPLICATION INFORMATION:

TELEPHONE:

TELEPHONE:

SEQUINCE CHARATION:

TELEPHONE:

TELEPHONE:

TELEPHONE:

TELEPHONE:

TELEPHONE:

TELEPHONE:

TENEMATION FOR SEQ ID NO:

SEQUINCE CHARATICS:

TENEMATION FOR SEQ ID NO:

TENEMATION FOR SEQ ID NO:

TENEMATION FOR SEQ ID NO:

TENEMATICATION FOR SEQ ID NO:

TENEMATION FOR SEQ ID NO:

TELEPHONE:

TENEMATICATION FOR SEQ ID NO:

TENEMATICATION FO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: Other nucleic acid;
DESCRIPTION: Synthetic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           %5.09-080-285-17; Sequence 17, Application US/09080285; Patent No. 6040181; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 18 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ANTI-SENSE: YES
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-465-485A-24
```

US-08-465-485A-24
, Sequence 24, Application US/08465485A
, Patent No. 5831066

```
US-09-249-730-218

Sequence 218, Application US/09249730

Sequence 218, Application US/09249730

Sequence 218, Application US/09249730

GENERAL INFORMATION:

APPLICANT: WRIGHT, Jim A.

TITLE OF INVENTION: Antitumor Antisense Sequences Directed Against R1 and TITLE OF INVENTION: ADDITION AND ADDITION AND ADDITION OF ADDITION OF ADDITION NUMBER: US/09/249,730

CURRENT APPLICATION NUMBER: US/09/249,730

CURRENT FILING DATE: 1999-02-11

NUMBER OF SEQ ID NOS: 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: 16..17 --
OTHER INFORMATION: Last two internucleoside linkages are
OTHER INFORMATION: phosphorothicates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 18; DB 3; Length 18; 100.0%; Pred. No. 10; 0; Indels ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 18; DB 3; Length 18; Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                               CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/465,485
FILING DATE: 05-UN-1995
PRIOR APPLICATION DATA:
APPLICATION DATE: US 08/124,256
FILING DATE: 20-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/840,716
FILING DATE: 21-FEB-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/288,692
FILING DATE: 22-DEC-1988
ATTORNEY/AGENT INFORMATION:
NAME: FOTINEY, Andrew D.
REGISTRATION NUMBER: 34,600
REGISTRATION NUMBER: 34,600
REGISTRATION NUMBER: 34,600
RECISTRATION NUMBER: 3335-070-55
TELECOMMUNICATION INFORMATION:
TELEPHONE: (408) 436-2070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: Other nucleic acid; DESCRIPTION: Synthetic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: (408) 436-2070
TELEFAX: (408) 436-2075
INFORMATION FOR SEQ ID NO: 24:
SEQUENCE CHARACTERISTICS:
LENGTH: 18 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 rereceaecerececen 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: Modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANTI-SENSE: YES FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-249-730-218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-080-285-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNEL OF SETTING THE SETTING THE SETTING SEQUENCE 24, Application US/09080285

| Sequence 24, Application US/09080285
| Patent No. 6040181
| GENERAL INFORMATION: Red, John TITLE OF INVENTION: Regulation of bcl-2 Gene Expression NUMBER OF SEQUENCES: 29
| NUMBER OF SEQUENCES: 29
| CORRESPONDENCE ADDRESS: ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, ADDRESSEE: P.C. STREET: 1755 S. Jefferson Davis Hwy., Suite 400
| STREET: Alington STREET: Virginia STRATE: Virginia COUNTRY: U.S.A. ZIP: 22202
| COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC Compatible COMPUTER: IBM PC Compatible COMPUTER: IBM PC Compatible COMPUTER: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 18; DB 3; Length 18; 100.0%; Pred. No. 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
1755 S. Jefferson Davis Hwy., Suite 400
                                                                                                                                                                 ZIP: 22202

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/080,285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PILING DATE:
CLASSIFICATION
PRIOR APPLICATION
PRIOR APPLICATION
PRIOR APPLICATION
PRIOR APPLICATION
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/124,256
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/288,692
PRIOR APPLICATION NUMBER: 31,600
PREFERENCE/DOCKET NUMBER: 34,600
REFERENCE/DOCKET NUMBER: 34,600
REFERENCE/DOCKET NUMBER: 34,600
REFERENCE/DOCKET NUMBER: 34,600
REFERENCE/COCKET NUMBE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 100.0
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 18 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                        CITY: Arlington
STATE: Virginia
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-080-285-24
```

a ઠે

ö

```
Sequence 59, Application US/09286098
Patent No. 6218371
GENERAL INFORMATION:
GENERAL INFORMATION:
THE REPLICANT: Weiner, George
TITLE OF INVENTION: Methods and Products for Stimulating the
TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and
TITLE OF INVENTION: Cytokines
FILE REFERENCE: C1039/7026/HCL
CURRENT PRELIGATION NUMBER: US/09/286,098
CURRENT PRILING DATE: 1999-04-02
EARLIER APPLICATION NUMBER: US 60/080,729
EARLIER FILING DATE: 1998-04-03
                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Schwartz, David A.
TITLE OF INVENTION: USB OF NUCLEIC ACIDS CONTAINING
TITLE OF INVENTION: USB OF NUCLEIC ACIDS CONTAINING
TITLE OF INVENTION: USB OF NUCLEIC DISORDERS
FILE REPERENCE: Cl039/7011
CURRENT APPLICATION NUMBER: Us/09/030,701B
CURRENT FILING DATE: 1998-02-25
PRIOR FILING DATE: 1997-02-28
NUMBER OF SEQ ID NOS: 65
SOFTWARE: FASTSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
0
                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 18; DB 3; Length 18; 100.0%; Pred. No. 10; tive 0; Mismatches 0; Indels
                                                                                                                                                                                            100.0%; Score 18; DB 3; Length 18; 100.0%; Pred. No. 10;
                                                                                                                                                                                                                                               0; Indels
                                           TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
JOTHER INFORMATION: Synthetic oligonucleotide
US-08-738-652-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; OTHER INFORMATION: synthetic oligonucleotide US-09-030-701-27
                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
US-09-030-701-27
; Sequence 27, Application US/09030701B
; Patent No. 6214806
                                                                                                                                                                                                                                                                                                                            1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 rereceasestat 18
                                                                                                                                                                                                                                                                                             1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                                            Query Match
Best Local Similarity 100.0
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-286-098-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 27
LENGTH: 18
SEQ ID NO 55
LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 55, Application US/08738652B
Fatent No. 6207646
GENERAL INFORMATION:
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPERENCE: C1039/7004 HCL;
CURRENT APPLICATION UNMBER: US/08/738,652B
CURRENT APPLICATION NUMBER: US/08/738,652B
GERLIER APPLICATION NUMBER: US/08/738,652B
FARLIER FILING DATE: 1996-10-15
FARLIER FILING DATE: 1994-07-15
FARLIER FILING DATE: 1995-02-07
NUMBER OF SEQ 1D NOS: 55
NUMBER OF SEQ 1D NOS: 55
SOFTWARE: Fast5SQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.0%; Score 18; DB 3; Length 18; Best Local Similarity 100.0%; Pred. No. 10; Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                            Sequence 1, Application US/09118220
Patent No. 6140051
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Brown, Lauren R.
APPLICANT: Xu, Cheng
TITLE OF INVENTION: FUUORESCENT DIBENZAZOLE DERIVATIVES
TITLE OF INVENTION: AND METHODS RELATED THERETO
NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U.S.A.

ZIP: 92660
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows
SOFTWARE: FastSEQ for Windows Version 2.0b
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/118,220
                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Knobbe, Martens, Olson & Bear
STREE: 620 Newport Center Drive, 16th Floor
STRIE: Newport Beach
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENTA.050A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: BARTEGIA, Well 1 S
REGISTRATION NUMBER: 39,901
REFERENCE/DOCKET NUMBER: GENT
TELECOMUNICATION INFORMATION:
TELEPHONE: 619-235-8550
TELEPHONE: 619-235-8550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 18 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-118-220-1
```

ö

ò

NUMBER OF SEC 1D NOS: 105 SOFTWARE: FastSEQ for Windows Version 3.0 SEQ 1D NO 59 LENGTH: 18 TYPE: DNA ORGANISM: Artificial Sequence

Gaps

;

us-10-789-758a-2.rni

ò d

```
APPLICANT: Zon, Gerald
APPLICANT: Zon, Gerald
APPLICANT: Debeyer, Dan
TITLE OF INVENTION: High Efficiency Encapsulation of Charged Therapeutic Agents ir
TITLE OF INVENTION: Lipid Vesicles
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 18; DB 3; Length 18; 100.0%; Pred. No. 10; trive 0; Mismatches 0; Indels
CLASSIFICATION: 514
ATTONEY/AGENT INFORMATION:
NAME: Haile, Lisa A.
REGISTRATION NUMBER: 38,347
REFERENCE/DOCKET NUMBER: 08918/012001
TELECHONE: 619/678-5070
TELEPAX: 619/678-509
INFORMATION FOR SEQ ID NO. 45:
SEQUENCE CHARACTERISTICS:
LENGTH: 18 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
"DOCCAY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
ZIP: 80443-5270
COMPUTER READBLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Mb
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS 5.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Word Perfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/078,954
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILMS JAB.

PRIOR APPLICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/856,374
FILING DATE: 14-MAY-1997
ATTORNEY/AGENT INFORMATION:
NAME: MATINA T. LATSON
TRECISTRATION NUMBER: 32,038
TELEPHONE: (970) 668-2050
TELEPHONE: (970) 668-2050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 14, Application US/09078954 Patent No. 6287591 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SE: Oppedahl & Larson
PO Box 5270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: SEMPLE, Sean C. APPLICANT: Klimuk, Sandra K. APPLICANT: Harasym, Troy APPLICANT: Hope, Michael J. APPLICANT: Ansell, Steven M. APPLICANT: Cullis, Pieter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scherrer, Peter
Geiser, Timothy
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.0
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                , MOLECULE TYPE: CDNA
US-08-960-774-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Frisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-078-954-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                  Sequence 104, Application US/09286098

Sequence 104, Application US/09286098

Patent No. 6218371

GENERAL INFORMATION:

APPLICANT: Karied, Arthur M.

TITLE OF INVENTION: Methods and Products for Stimulating the

TITLE OF INVENTION: Immune System Using Immunotherapeutic Oligonucleotides and

TITLE OF INVENTION: Cytokines

TITLE OF INVENTION: Cytokines

FILE REPERRING: 1039/7026/HCL.

CURRENT APPLICATION NUMBER: US/09/286,098

CURRENT FILING DATE: 1998-04-02

EARLIER FILING DATE: 1998-04-02

NUMBER OF SEQ ID NOS: 105

SOFTWARE: PSELSEQ for Windows Version 3.0

SEQ ID NO 104

LENTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                           ö
                                                                                                                                           Gaps
                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Krieg et al.,
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
NUMBER OF SEQUENCES: 111
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/960,774
FILING DATE: 30-October-1997
CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S. Serial No. 6239116 08/738,652
FILING DATE: October 30, 1996
                                                                                              Query Match
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
100.0%; Score 18; DB 3; Length 18;
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Synthetic Sequence US-09-286-098-59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Synthetic Sequence US-09-286-098-104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-960-774-45
; Sequence 45, Application US/08960774
; Patent No. 6239116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                          1 rereceasestates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                              US-09-286-098-104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
```

ð 셤

```
ઠે
                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14

US-09-325-193A-51

i Sequence 51, Application US/09325193A

i Sequence 51, Application US/09325193A

i Batent No. 6406705

i GENERAL INFORMATION:

APPLICANT: Brovis, Haather L.

APPLICANT: Schorr, Joachim

APPLICANT: Schorr, Joachim

TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant

TITLE OF INVENTION: Unmethylated CpG Dinucleotide as an Adjuvant

FILE REFERENCE: C1039/7025/HCL

CURRENT APPLICATION NUMBER: US/09/325, 193A

CURRENT APPLICATION NUMBER: US/09/325, 193A

PRIOR FILING DATE: 1998-09-16

PRIOR FILING DATE: 1998-09-16

PRIOR FILING DATE: 1998-09-16

PRIOR FILING DATE: 1998-09-16

NUMBER OF SEQ ID NOS: 98

SOFTWARE: FRASESC for Windows Version 3.0

LENGTH: 18

TUDE OF DATE:

LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
100.0%; Score 18; DB 3; Length 18;
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                               Query Match
100.0%; Score 18; DB 3; Length 18;
Best Local Similarity 100.0%; Pred. No. 10;
Matches 18; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 15
US-09-744-426-17
i Sequence 17, Application US/09724426
i Patent No. 6414134
i GENERAL INFORMATION:
APPLICANT: Reed, John
TITLE OF INVENTION: Regulation of BCL-2 Gene Expression
FILE REFERENCE: 10412-024
CURRENT APPLICATION UNMBER: US/09/724,426
CURRENT FILING DATE: 2000-11-28
NUMBER OF SEQ ID NOS: 29
SOTUMBER OF SEQ ID NOS: 29
I SEQ ID NO 17
LENGTH: 18
TENGTH: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PEATURE:

OTHER INFORMATION: Synthetic Oligonucleotide
US-09-325-193A-51
                          TYPE: nucleic acid
FARANDENESS: single
TOPOLOGY: linear
MOLECULE TYPE: other nucleic acid
HYPOTHETICAL: no
ANTI-SENSE: yes
US-09-078-954-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 TCTCCCAGCGTGCGCCAT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Artificial Sequence
LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

Sequence Sequence Sequence

Sequence Sequence Sequence

Sequence Sequence Sequence

15733, A 21, Appl 22, Appl 921, App 921, Appl 27, Appl 27, Appl 27, Appl 27, Appl 27, Appl 28, Appl 165, Appl 185, Appl 185, Appl 185, Appl

Sequence Sequence Sequence

18, Appl 174326, 174518,

Sequence Sequence Sequence Sequence Sequence Sequence Sequence

OM nucleic

Run on:

Sequence:

Minimum DB Maximum DB

Database

```
US-01-03-701-63

Sequence 63, Application US/09030701B

Sequence 63, Application US/09030701B

Sequence 63, Application US/09030701B

Sequence 63, Application US/09030701B

GREERAL INFORMATION:

APPLICANT: Schwartz, David A.

TITLE OF INVENTION: UNMETHYLATED CpG DINUCLEOTIDE IN THE TREATMENT OF TITLE OF INVENTION: LPS-ASSOCIATED DISORDERS

FILE REFERENCE: 1039/7/011

CURRENT APPLICATION NUMBER: 60/039,405
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
TITLE OF INVENTION: Immunostimulatory Nucleic Acid Molecules
FILE REPERBNES: 0.1039/7004 HGL
CURRENT APPLICATION NUMBER: US/08/738,652B
CURRENT FILING DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/36,063
EARLIER PILING DATE: 1995-07-07
NUMBER OF SEQ ID NOS: 55
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 20; DB 3; Length 20; 100.0%; Pred. No. 1.6; ive 0; Mismatches 0; Indels
US-09-672-126B-136
US-09-672-126B-151
US-09-672-126B-17
US-09-672-126B-17
US-09-949-016-15733
US-09-464-535-41
US-09-464-535-41
US-09-482-273-78
US-10-104-047-1222
US-09-620-312D-921
US-09-620-312D-921
US-08-386-06-3-27
US-09-672-126B-165
US-09-672-126B-165
US-09-570-767-18227
US-09-513-999C-15817
US-09-513-999C-15817
US-09-513-999C-15817
US-09-949-016-174518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Synthetic oligonucleotide US-08-738-652-12
                                                                                                                                                                                                                                                                                                                           ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12, Application US/08738652B Patent No. 6207646 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.
Best Local Similarity 100.
Matches 20; Conservative
    US-08-738-652-12
                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          s, App
s, App
Appli
Appli
Appli
                                                                                            May 4, 2006, 03:52:26; Search time 42.2989 Seconds (without alignments) 840.478 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                 5.1.7
Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                           Issued_Patents_NA:*

1: /cgn2_6/ptodata/1/ina/1_COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/A_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

7: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

8: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

9: /cgn2_6/ptodata/1/ina/PCTOMB.seq:*

9: /cgn2_6/ptodata/1/ina/RCTOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-082-6498-59
US-09-082-6498-59
US-09-191-170-47
US-09-317-619-12
US-09-56-101-59
US-09-672-1268-1
US-09-672-1268-1
US-09-672-1268-1
US-09-672-1268-1
US-09-318-063-1
US-08-386-063-1
US-09-300-701-21
US-09-300-701-21
US-09-300-701-21
US-09-300-701-21
US-09-300-701-21
US-09-300-701-21
US-09-300-701-21
US-09-300-701-21
US-09-300-701-21
US-09-300-701-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -09-672-126B-135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-672-126B-5
US-09-672-126B-6
US-09-672-126B-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -09-672-126B-68
                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -09-954-987B-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-738-652-12
                                                                                                                                                                                                                                                      1303057 seqs, 888780828 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                 GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                   Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                   nucleic search, using sw model
                                                                                                                                                                                  1 gggggcaacgttgagggggg 20
                                                                                                                                                                                                           IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                            seq length: 0
seq length: 200000000
                                                                                                                                               US-10-789-758A-4
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
Match Length
                             Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0
100.0
100.0
100.0
100.0
100.0
92.0
92.0
92.0
87.0
87.0
                                                                                                                                                                                                                                                                                                                                                                                                                              . . . . . . . . . . .
                                                                                                                                                                                                                                                                                                                                                      Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Perfect score:
                                                                                                                                                                                                             Scoring table:
```

ö

Gaps

ö

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ठ
                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTY: USA

ZIP: 92037

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

OOFTWARE: ASCII text

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/960,774

FILING DATE: 30-October-1997

CLASSIFICATION 514

PRIOR APPLICATION DATA:

APPLICATION NUMBER: U.S. Serial No. 6239116 08/738,652

FILING DATE: October 30, 1996

CLASSIFICATION S14

ATTORNEY/AGENT INFORMATION:

MAME: HAILe. Lisa A.

RECISTRATION NUMBER: 38,347

RECISTRATION NUMBER: 38,347

RECISTRATION INFORMATION:

TELECHONE: 619/678-5099

INFORMATION FOR SEQ ID NO: 90:

SEQUENCE CHARACTERISTICS:

LENGTH: 20 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT KILEGE 41.,
TITLE OF INVENTION: IMMUNOSTIMULATORY NUCLEIC ACID MOLECULES
NUMBER OF SEQUENCES: 111
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson P.C.
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 20; DB 3; Length 20;
Pred. No. 1.6;
                                                                                                                                                                                                                                 Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                 ; FEATURE:
; OTHER INFORMATION: SYNThetic oligonucleotide
US-09-030-701-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
PRIOR FILING DATE: 1997-02-28
NUMBER OF SEQ ID NOS: 65
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 63
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-960-774-90
; Sequence 90, Application US/08960774
; Patent No. 6239116
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                          1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                   1 GGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                          TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , MOLECULE TYPE: CDNA
US-08-960-774-90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                          셤
```

GGGTCAACGTTGAGGGGG 20

```
Sequence 52, Application Us/09082649B
Parent No. 633906B
MERREAL IMPORATION:
MERREAL IMPORATION:
MERREAL IMPORATION:
MERREAL IMPORATION:
MERREAL IMPORATION:
MERREAL IMPORATION:
MERREAL CONSTRUCTION WINDER: US/0/04/23
FILE REFERENCE: C1039/1009-06120
CURREAT FILING DATE: 1399-05-20
MERGE FILING DATE: 1399-05-20
MERCE FILING DATE: 1399-05-20
MERCE FILING DATE: 1399-05-20
MERGE FILING DATE: 1399-05-20
MERCE FILING DATE: 1399-
```

```
Gaps
                                                                                                                                                                Gaps
                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 59, Application US/09965101

Sequence 59, Application US/09965101

Batent No. 6821957

GENERAL INFORMATION:

APPLICANT: Davis, Heather L.

APPLICANT: Exies, Arthur M.

APPLICANT: Schorr, Joachim

APPLICANT: W., Tong

TITLE OF INVENTION: Therapeutic Protocols

TITLE OF INVENTION: Therapeutic Protocols

TITLE OF INVENTION: Therapeutic Protocols

CURRENT APPLICATION NUMBER: US/09/965,101

CURRENT FILING DATE: 2001-09-26

PRIOR FILING DATE: 1998-05-20

PRIOR FILING DATE: 1998-05-20

PRIOR FILING DATE: 1997-05-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOHERALI IN CACABLIAN.

JAPPICANT: Krieg, Arthur M.

APPLICANT: Krieg, Arthur M.

APPLICANT: Schort, Joachim

APPLICANT: Schort, Joachim

APPLICANT: Groot, Joachim

APPLICANT: Groot, Joachim

APPLICANT: Wu, Tong

TITLE OF INVENTION: Vectors and Methods for Immunization or

TITLE OF INVENTION: Therapeutic Protocols

FILER REFERENCE: Cl039/7057 (HCL/MAT)

CURRENT APPLICATION NUMBER: US/09/965,101

FRIOR APPLICATION NUMBER: US 09/082,649

PRIOR FILING DATE: 1998-05-20

PRIOR FILING DATE: 1997-05-20

WUMBER OF SEQ ID NOS: 84

SOFTWARE: PASISED for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1.6; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                       Score 20; DB 3; Length 20;
Pred. No. 1.6;
                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc_feature

1 DOCATION: (0) ... (0)

1 USCATION: Has a phosphorothioate backbone.

US-09-965-101-52
; FEATURE:
; OTHER INFORMATION: Synthetic Oligonucleotide
US-09-337-619-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
OTHER INFORMATION: synthetic oligonucleotide
                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                Sequence 52, Application US/09965101
Patent No. 6821957
                                                                                                                                                                                                                                                                     1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                  1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                       Query Match
Best Local Similarity 100.0%;
Matches 20; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-965-101-59
                                                                                                                                                                                                                                                                                                                                                                                US-09-965-101-52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                           ö
                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                           ö
                                                                                                                                                                                                                                                            Sequence 47, Application US/09191170

Sequence 47, Application

TITLE OF INVENTION:

TITLE OF INVENTION:

TITLE OF INVENTION:

SEQUENCE C1039/7017

SEQUENCE APPLICATION NUMBER: US/09/191,170

SEALIER PILING DATE: 1998-11-30

SEALIER PILING DATE: 1998-10-30

SEALIER PILING DATE: 1995-00-07

SEALIER PILING DATE: 1995-00-07

SEALIER PILING DATE: 1996-01-15

NUMBER OF SEQ ID NOS: 99

SOFTWARE PRESED FOR Windows Version 3.0

SEQ ID NO 47

LENGTH 20
Query Match 100.0%; Score 20; DB 3; Length 20; Best Local Similarity 100.0%; Pred. No. 1.6; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 100.0%; Pred. No. 1.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
TITLE OF INVENTION: Methods of Treating Cancer Using
TITLE OF INVENTION: Methods of Treating Cancer Using
TITLE OF INVENTION: Immunostimulatory Oligonucleotides
FILE REFERENCE: C1039/7021/HCL
CURRENT PELLING DATE: 1999-06-21
EARLIER APPLICATION NUMBER: US 08/960,774
EARLIER PILING DATE: 1997-10-30
EARLIER PILING DATE: 1996-10-30
EARLIER APPLICATION NUMBER: US 08/38,652
EARLIER APPLICATION NUMBER: US 08/38,652
EARLIER APPLICATION NUMBER: US 08/36,063
EARLIER APPLICATION NUMBER: US 08/36,063
EARLIER APPLICATION NUMBER: US 08/276,358
EARLIER APPLICATION NUMBER: US 08/276,358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; OTHER INFORMATION: synthetic oligonucleotide US-09-191-170-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 123
SOFTWARE: PastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12, Application US/09337619
Patent No. 6653292
                                                                                                                                               1 GGGTCAACGTTGAGGGGG 20
                                                                                                             1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-337-619-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 12
LENGTH: 20
                                                                                                                ઠે
                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-672-126B-156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 135
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                      FEATURE:
OTHER INFORMATION: synthetic oligonucleotide
NAME/KEY: misc_feature
LOCATION: (0)...(0)
OTHER INFORMATION: Has SOS-ODN backbone with two S-linkages at the 5'
OTHER INFORMATION: edd, five S-linkages at the 3' end, and O-linkages
OTHER INFORMATION: in between.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.0%; Pred. No. 1.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.0%; Pred. No. 1.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/09672126B
Patent No. 6949520
GENERAL INFORMATION:
APPLICANT: Hartmann, Gunther
APPLICANT: Hartmann, Gunther
TITLE OF INVENTION: Methods Related to Immunostimulatory
TITLE OF INVENTION: Mucleic Acid-Induced Interferon
FILE REFERENCE: C1039/704
CURRENT APPLICATION NUMBER: US/09/672,126B
CURRENT FILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: 60/156,147
PRIOR PILING DATE: 1999-09-29
NUMBER OF SEQ ID NOS: 169
SOFTWARE: FRESERG for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: (1)...(2)
OTHER INFORMATION: Backbone has phosphorothioate linkages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: (15) ... (19)
OTHER INFORMATION: Backbone has phosphorothioate linkages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: (3)...(14)
OTHER INFORMATION: Backbone has phosphodiester linkages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: (20)...(20)
OTHER INFORMATION: Backbone has phosphodiester linkages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic Oligonucleotide
PRIOR APPLICATION NUMBER: US 60/047,209
PRIOR FILING DATE: 1997-05-20
NUMBER OF SEQ ID NOS: 84
SUPMARE: FastSEQ for Windows Version 3.0
SEQ ID NO 59
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc_feature
LOCATION: (1)...(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
US-09-672-126B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-672-126B-1
                                                                                                                                                                                                                                                                                                                                                        US-09-965-101-59
                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 156, Application US/09672126B
Sequence 156, Application US/09672126B
Retent No. 6949520
GENERAL INFORMATION:
APPLICANT: Hartmann, Gunther
APPLICANT: Brazler, Robert L.
APPLICANT: Krieg, Arthur
TITLE OF INVENTION: Methods Related to Immunostimulatory
TITLE OF INVENTION: Nucleic Acid-Induced Interferon
FILE REFERENCE: C1039/7044
CURRENT APPLICATION NUMBER: US/09/672,126B
CURRENT PILING DATE: 2000-09-27
PRIOR APPLICATION NUMBER: 60/156,147
PRIOR PILING DATE: 1999-09-29
US-09-672-126B-135

Sequence 135, Application US/09672126B
Sequence 135, Application US/09672126B
Sequence 135, Application US/09672126B
Sequence 135, Application US/09672126B
SERETAL UNFORMATION:
APPLICANT: Hartenan, Gunther
TITLE OF INVENTION: Methods Related to Immunostimulatory
TITLE OF INVENTION: Mucleic Acid-Induced Interferon
FILE REFRENCE: C10397704
CURRENT APPLICATION NUMBER: US/09/672,126B
CURRENT PRIOR APPLICATION NUMBER: 60/156,147
PRIOR APPLICATION NUMBER: 60/156,147
PRIOR PILING DATE: 1999-09-29
NUMBER OF SEQ. ID NOS: 169
NUMBER OF SEQ. ID NOS: 169
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
100.0%; Score 20; DB 3; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc feature
LOCATION: (1)...(2)
OTHER INFORMATION: Backbone has phosphorothioate linkages.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc feature
LOCATION: (16)...(20)
OTHER INFORMATION: Backbone has phosphorothioate linkages.
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: (3)._.(15)
OTHER INFORMATION: Backbone has phosphodiester linkages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ) OTHER INFORMATION: Synthetic Oligonucleotide US-09-672-126B-135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 169
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 156
LENGTH: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGTCAACGTTGAGGGGGG 20
```

```
60 STATE STREET, SUITE 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 94.7
Matches 18; Conservative
                 BOSTON
: MASSACHUSETTS
: TY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: DNA
                                                                                                                                                                                                                   FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-030-701-21
                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-386-063-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 92.0%; Score 18.4; DB 3; Length 20; Best Local Similarity 95.0%; Pred. No. 9.5; Matches 19; Conservative 0; Mismatches 1; Indels
                                                                                       Query Match
100.0%; Score 20; DB 3; Length 21;
Best Local Similarity 100.0%; Pred. No. 1.6;
Matches 20; Conservative 0; Mismatches 0; Indels
                 LOCATION: (21)...(21)
CTHER INFORMATION: Backbone has phosphodiester linkages.
US-09-672-126B-156
                                                                                                                                                                                                                                                                                        Sequence 1, Application US/08386063
Patent No. 6008200
GENERAL INFORMATION:
FAPLICANT:
Arthur M. Krieg, M.D.
TITLE OF INVENTION: IMMUNOMODULATORY OLIGONUCLEOTIDES
NUMBER OF SEQUENCES: 27
CORRESPONDENCES: 27
CORRESPONDENCES: ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 STATE STREET, SUITE 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Arthur M. Krieg, M.D.
TITLE OF INVENTION: IMMUNOMODULATORY OLIGONUCLEOTIDES
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
ADDRESSE: LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: ARNOLD, BETHE
REGISTRATION NUMBER: 35,430
REFERENCE/DOCKET NUMBER: 31,430
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-5941
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                       2 GGGGTCAACGTTGAGGGGGG 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGGTCAACGTTGAGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGGGTCAACGTTCAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/08386063
Patent No. 6194388
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: BOSTON
STATE: MASSACHUSETTS
COUNTRY: USA
NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                       US-08-386-063-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-386-063-1
                                                                                                                                                                                                  윱
                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
GENERAL INFORMATION:
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Krieg, Arthur M.
APPLICANT: Schwartz, David A.
TITLE OF INVENTION: UNMETHYLATED CDG DINUCLEOTIDE IN THE TREATMENT OF TITLE OF INVENTION: LPS-ASSOCIATED DISORDERS
FILE REFERENCE: C1039/7011
CURRENT APPLICATION NUMBER: US/09/030,701B
CURRENT FILING DATE: 1998-02-25
PRIOR APPLICATION NUMBER: 60/039,405
PRIOR PLILING DATE: 1997-02-28
NUMBER OF SEQ ID NOS: 65
SOFTWARE: FREESEQ for Windows Version 3.0
: LENGTH: 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 18.4; DB 3;
Pred. No. 9.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 9.5;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: synthetic oligonucleotide US-09-030-701-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87.0%; Score 17.4; I 94.7%; Pred. No. 29; Live 0; Mismatches
ZIP: 02109-1875
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/386,063
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 21, Application US/09030701B Patent No. 6214806
                                                                                                                                                                                                        CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: ARNOLD, BETH E.
REGISTRATION NUMBER: 35,430
REFERENCE/DOCKET NUMBER: UIZ-O
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
TELEPHONE: (617)227-7400
TELEPHONE: (617)227-5941
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 20 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGGTCAACGTTGAGGGGGG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 dederchacerrchededed 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGGTCAACGTTGAGGGGG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGGTCAACGTTGACGGGG 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 92.0%;
Best Local Similarity 95.0%;
Matches 19; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
```

Search completed: May 4, 2006, 07:23:51 Job time : 43.2989 secs